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ABSTRACT

Japan's rapidly aging population has become a top policy issue, especially as the increasing costs of pensions and medical care are debated. With the highest life expectancy on earth, the Japanese potentially face long periods of retirement, as well as the possibility of long periods of disability. Although family support of the elderly is thought to have been strong traditionally, the recent decline in co-residence with children is one indication that the way that support is given may be changing. This issue is of particular concern to the government, which wants to avoid any greater responsibility for the elderly than is necessary given the dramatic population aging yet to come. The government is also encouraging employers to provide more employment opportunities for the elderly at the same time that it is trying to raise the eligibility age for receipt of public pensions. There is resistance on the part of employers, however, because wages and retirement allowances in Japan are positively related to length of employment. Furthermore, it is not clear whether elderly Japanese of the future will be as willing to work, if they learn to enjoy increased leisure early in their careers. Nevertheless, it is unlikely that population aging will lead to Japan's economic decline. Although the saving rate may decline somewhat, restructuring the economy and continued overseas investment should keep the economy growing in the long run. Important in both the care of the frail elderly and the continued growth of the economy will be the roles played by middle-aged Japanese women. The document provides background information useful to teachers preparing lessons in social studies. (Author/JB)

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POPULATION BULLETIN
Vol. 44, No. 2, July 1989

The Graying of Japan

By Linda G. Martin

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Abstract—Japan's rapidly aging population has become a top policy issue, especially as the increasing costs of pensions and medical care are debated. With the highest life expectancy on earth, the Japanese potentially face long periods of retirement, as well as the possibility of long periods of disability. Although family support of the elderly is thought to have been strong traditionally, the recent decline in co-residence with children is one indication that the way that support is given may be changing. This issue is of particular concern to the government, which wants to avoid any greater responsibility for the elderly than is necessary given the dramatic population aging yet to come.

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POPULATION BULLETIN
Vol. 44, No. 2, July 1989

Yoshihiro Fujita

3

Linda G. Martin

By the year 2025, nearly one-quarter of Japan's population will be over the age of 65, creating many challenges for policymakers.

The Graying of Japan

By **Linda G. Martin**

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Dr. Martin is grateful to the Japan-United States Educational Commission and the Employee Benefit Research Institute for providing financial support for this research, to Nihon University for hosting her recent stay in Japan, and for the continuing support of the East-West Center and the University of Hawaii. Toshio Kuroda, Naohiro Ogawa, Noriko Tsuya, Daisaku Maeda, Machiko Osawa, Hiroshi Kojima, Atsushi Seike, Alice Harris and her staff, and George C. Myers, among many others provided valuable advice and assistance.

The population of Japan is aging faster than any on earth, a result of declining birth and death rates. The situation of the elderly of Japan is like the proverbial glass of water that is either half full or half empty, depending on whether the positive or negative aspects of their lives are emphasized. In some ways, elderly Japanese are better off than the elderly of the other developed countries. They hold the position of "honorable elders," a reflection of the Confucian precept of filial piety. Japan even has a national holiday, Respect for the Aged Day, September 15th, when most offices and factories are closed. Furthermore, a relatively high proportion of elderly Japanese live with their adult children, which is often cited as evidence of the reverence this country pays to the aged.

However, it can also be argued that elderly Japanese are not really so well off and that the "ecstasy years" of old age are losing their rosy glow—if they truly ever had one. Among the more sensational evidence cited are the supposedly high rate of suicide among elderly Japanese and the existence of temples where the elderly go to pray for a quick death. Also, in recent years, the number of activities for or honoring the elderly on their special day have been few and far between. For most Japanese, September 15th is just another holiday.

The lives of elderly Japanese are changing considerably—for better or worse. For example, the proportion living with their children declined from 77 percent in 1970 to 65 percent in 1985, but over the same period, the suicide rate fell from 54 to 45 deaths per 100,000 for persons ages 65 and over.[1]

The particularly rapid pace of aging in Japan and the potential consequences have captured the attention of policymakers and officials. *Japan in the Year 2000*, the 1982 report of the top-level Long-Term Outlook Committee of the Economic Planning Agency,[2] listed population aging along with internationalization and maturation of the economy as the three major challenges for 21st-century Japan. Japanese prime ministers have regularly referred to aging as they have set the policy agenda, recognizing that population aging affects many aspects of the society and the economy.

For example, just as the population is aging, so is the labor force. An important question facing policymakers is: How can Japan make use of the growing number

of older workers and continue its economic success, especially given the seniority-based wage system and lifetime employment? Furthermore, economic theory suggests that an older population will lead to a lowering of the saving rate. In the 1985 White Paper on the Economy, the Japanese Economic Planning Agency predicted that as a result of population aging, the extraordinarily high Japanese saving rate would be cut in half in the 21st century.[3] Other economists have questioned this prediction, and there is also debate about the implications of aging for investment, both at home and overseas, and consequently, debate about the implications for the balance of payments.

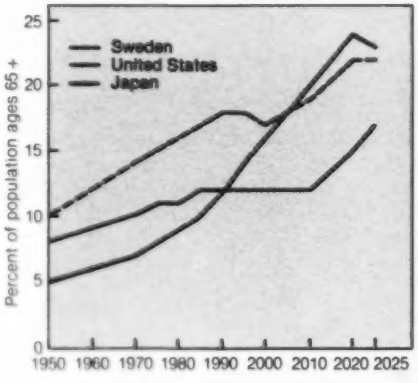
Perhaps the greatest challenge facing Japan is how to provide for the increasing numbers of elderly in the 21st century when close to one-quarter of the population will be over age 65. There is a growing recognition that more public and private services will be necessary to care for the elderly. In opening the January 1988 session of the Diet, the national legislative body, then Prime Minister Noboru Takeshita highlighted the need for review of the national health insurance system and pension schemes and for improved nursing homes for the aged. The costs of increased services will be tremendous. One indicator of the financial burden to be borne by government, the percentage of Japan's Gross Domestic Product devoted to social expenditures, is projected to grow from 14 to 27 percent between 1983 and 2025.

Policymakers are concerned that the government increasingly is being expected to play a larger role in the care of the elderly while the individual elderly person and families play smaller roles. Recent pension, medical insurance, and tax reforms have all been designed to shift the balance somewhat away from the government. In this vein, the 1987 White Paper on Health and Welfare emphasized the importance of home care of the elderly and stressed the importance of family members as care-givers.[4]

However, with longer lives, fewer elderly living near or with their children, and increased employment of middle-aged women, the traditional caretakers of the elderly, a smaller proportion of elderly Japanese can rely upon care by family members. Even where such care is provided, there is some evidence of considerable family stress and poor quality of care.[5]

This *Bulletin* examines the demographic determinants and pace of population aging in Japan; the family situations of older Japanese; their labor force participation and programs to encourage them to continue working; the provision of pensions, medical care, and social services; and the implications of aging for economic performance and international economic relations. It will also investigate how Japan is adapting to

Figure 1. Percentage of Population 65 and Over in Japan, Sweden, and the United States: 1950-2025



Sources: Japan Institute of Population Problems, *Latest Demographic Statistics 1987* (Tokyo: Ministry of Health and Welfare, 1988) p. 70. The projections for Japan are based on the institute's middle-series projection, whereas the projections for the other countries are based on United Nations, *World Population Prospects: Estimates and Projections as Assessed in 1984* (New York, 1986).

Table 1. Projections of the Elderly Japanese Population, 1985-2025

	1985	2000	2010	2025
Number (1000s) 65 +	12,472	21,338	27,104	31,465
Percent of total population	10.3	16.6	20.0	23.4
Percent of population aged 65 +	62.2	60.4	54.0	44.8
65-74	31.5	30.4	35.1	40.1
75-84	6.3	9.3	10.9	15.1
85 +				
Sex ratio (Males 100 females)	69.2	73.7	76.5	76.8

Source: Japan Institute of Population Problems, *Population Projections for Japan: 1985-2025* (Tokyo: Ministry of Health and Welfare, 1987).

population aging and to what extent its experiences can be viewed as a model for the West or for rapidly developing countries of Asia.

The Demographics of Aging

During the first quarter of the 20th century, Japan experienced the high mortality and fertility levels characteristic of many present-day developing countries. In 1925, life expectancy at birth was about 45 years and women gave birth to a total of 5.1 children, on average, during their childbearing years.[6] But both mortality and fertility fell rapidly in the ensuing decades. By 1950, life expectancy had increased to 60 years and the total fertility rate (TFR), or average number of lifetime births per woman under current birth rates, had fallen to 3.7 children. The demographic change after World War II was even more dramatic. By 1960, the TFR had fallen below the replacement level of 2.1 children per woman (the number of children needed to just replace a couple in the population). Between 1977 and 1987, the TFR was stable at about 1.8 children. Japanese life expectancy is now the highest on earth—in 1987, 76 years for males and 82 years for females. With no significant international migration, the low fertility and mortality yield an annual population growth rate of only 0.5 percent.

Japan began its demographic transition from high to low fertility and mortality much later than the United States and other developed countries, but finished it with record speed. The transition occurred in less than 50 years, resulting in the extremely rapid aging of the Japanese population, as shown in Figure 1. Although the proportion of the population ages 65 and over—10 percent in 1985—is less than in many other developed countries such as the United States (12 percent) and Sweden (17 percent), by the year 2025, Japan is projected to have one of the most elderly populations on earth with 23 percent over age 65. In absolute numbers, the elderly population of Japan is expected to increase from 12.5 to 31.5 million between 1985 and 2025 (see Table 1), which will escalate the demand for age-related services, such as medical care.

As in other developed countries, Japan's elderly population itself will age in the coming decades. As shown in Table 1, the proportion of the elderly population in the 65-74-year-old group will decline, while the proportions in the 75-84 and 85-and-older groups will increase. This change in the elderly age

Table 2. Average Life Expectancy and Major Causes of Death: Selected Countries, 1980s

	Life expectancy (yrs.)		Deaths per 100,000		
	Male	Female	Heart Disease	Cancer	Cerebrovascular Disease
Japan, 1987	75.9	82.1	118	164	102
Australia, 1986	73.0	79.6	240	174	78
Canada, 1986	73.1	79.9	229	188	55
Denmark, 1986	71.9	77.8	366	286	102
England and Wales, 1987	72.6	78.3	356	280	138
France, 1986	71.8	80.0	204	240	108
Iceland, 1987	74.9	79.0	238	178	72
Sweden, 1986	74.0	80.2	425	231	117
United States, 1986	71.4	78.6	308	195	62
West Germany, 1987	72.2	78.9	363	272	142

Source: World Health Organization, *1988 World Health Statistics Annual* (Geneva, 1988).

distribution will have important implications for public policy.

Another common feature that Japan shares with the West is the significantly feminine nature of old age. In 1985, there were 69 older males for every 100 older females in Japan. Nevertheless, as shown in Table 1, this ratio is expected to increase to 77 males per 100 females by 2025, because, even though women are still expected to outlive men, survival up to age 65 is projected to increase more for males than for females.

Fertility Decline and Aging

In its initial stages population aging is primarily caused by fertility reduction, although in its later stages mortality decline plays the more important role. Today in the developed countries, including Japan, fertility is generally stable at a low level. Most Japanese demographers expect fertility to remain below the replacement level for the foreseeable future. Toshio Kuroda, a preeminent Japanese demographer, argues that the "small family orientation" is well entrenched.[7] He cites the high cost of housing and children's education, increased employment of women, and the majority opinion of young people, women especially, that at least some period of "single life" before marriage may be desirable. The average age at first marriage has increased gradually from 26.9 years for males and 24.2 years for females in 1970 to 28.3 and 25.6 years, respectively, in 1986. The divorce rate, though low by international standards, is increasing. Japan's contraceptive use rate, though primarily of traditional methods, is comparable to other more developed countries, and its abortion rate is extremely high.[8] All these factors point to continued low fertility. Even if fertility were to increase moderately, it would not slow the aging process significantly over the next few decades.

Mortality Decline: Longer Lives

More important for future population aging in Japan will be the course of mortality, not fertility. The government's projections assume an increase in the expectation of life at birth from 74.8 to 77.9 years for males and 80.5 to 83.8 for females between 1985 and 2025. However, in the 1980s, mortality decline progressed faster than expected in Japan and government projections made in the 1970s were based on mortality levels already considered to be too high.

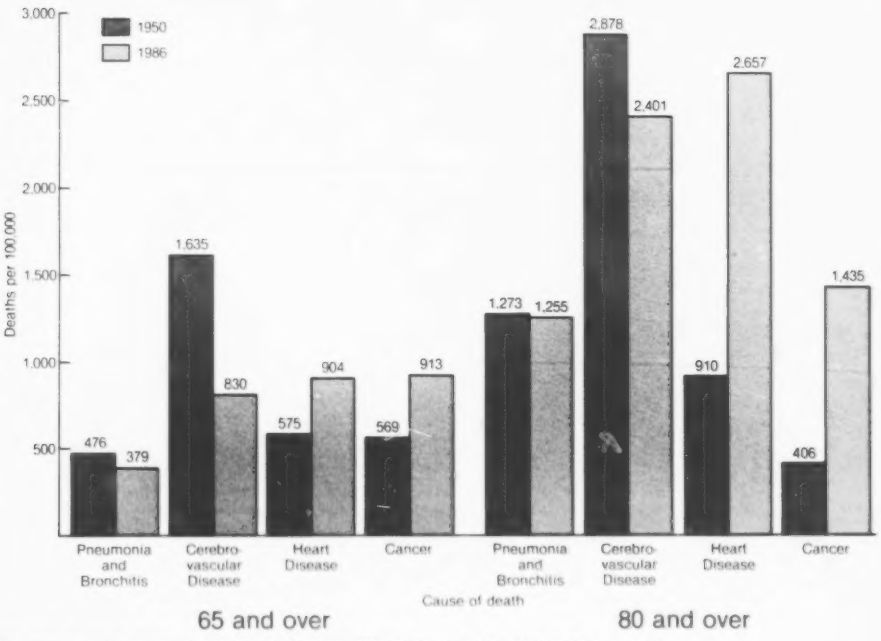
Japan has entered what is considered the fourth stage of the epidemiologic transition*, the stage of delay of the onset of degenerative diseases.[9] Since World War II, the main causes of death have shifted from respiratory diseases, such as tuberculosis, pneumonia, and bronchitis to the chronic degenerative diseases—cancer, heart disease, and cerebrovascular disease. Further declines in mortality are not likely to result from changes in the major causes of deaths, but rather in shifting the risk of dying from these degenerative diseases to older ages.

In most developed countries, heart disease is the number-one killer, followed by cancer and cerebrovascular disease. Japan's cause-of-death pattern is different, as shown in Table 2. Between 1958 and 1980, the order was cerebrovascular disease, cancer, and heart disease. In 1981, cancer became the top cause of death, and in 1985, heart disease gained second place.

This pattern for the overall population is reflected in the older population also (see Figure 2). After 1984, the most important cause of death among those 65

*The first stage of the epidemiologic transition is the age of epidemics and famines, the second is the period when mortality from infectious and parasitic diseases declines, the third is the era of degenerative diseases, such as cancer and heart disease.

Figure 2. Major Causes of Death Among the Elderly: Population 65 and Over, and 80 and Over, Japan, 1950 and 1986



Source: Japan Ministry of Health and Welfare, *Vital Statistics 1986*, Vol. 1 (Tokyo, 1987)

and over shifted from cerebrovascular disease to cancer with heart disease a very close second. Among the 80 and over population, however, heart disease is number one, followed by cerebrovascular disease and cancer.

Until the 1960s, "senility," which then was often used as a catchall category for ill-defined causes, was the most important cause of death in the 80 and over group and ranked second in the 65 and over group. Today senility is more precisely diagnosed by physicians (although the diagnosis can be confirmed only at autopsy) and is the fifth-ranked cause of death for those 65 and over. Consequently, some of the changes shown in Figure 2 reflect improved diagnosis of causes of death in recent decades.

Contrary to a popular belief among some non-Japanese, suicide is not a major cause of death among the elderly in Japan, and it is *relatively* important only at younger ages where overall mortality is low (see Box 1).

After adjusting for differences in national age compositions, Japan has the lowest death rates from ischemic heart disease and cancer, but the highest rate from cerebrovascular disease of all the countries listed in Table 2. The differences between the Japanese and other developed countries' patterns and the recent changes in the Japanese causes of death are frequently attributed to differences in diet and lifestyle.[10] The decline in the consumption of salt, which was high in the traditional Japanese diet of rice, salted vegetables, and fish, and the improvement of home heating are said to have reduced cerebrovascular disease. At the same time, this traditional diet, which is low in animal protein and dairy products, is considered a factor in the relatively low incidence of heart disease in Japan.

Despite the relatively low cancer death rate, there is concern about the continuing increase in cancer deaths even within the elderly population itself. Of particular concern is the rising incidence of cancers associated with smoking, especially among males. In the 75 and over group, Japan has a higher death rate for cancers of the trachea, lung, and bronchus than do France and Sweden.

There is an active anti-smoking campaign in Japan, although it is not yet so strong as in the United States. The Japanese Ministry of Health and Welfare is encouraging anti-smoking measures, such as the recent banning of smoking in Tokyo subway stations. The ministry itself has gone only so far as to ban smoking in its meetings, set up smoking corners in its waiting rooms, and attach health warnings to the cigarette machines in its buildings.[11]

The percentage of Japanese males over age 20 who smoke has declined from about 70 to 60 percent in the 1980s, while the percentage of adult females who smoke has fluctuated between 12 and 15 percent,[12] but it will take time before any decrease in smoking is manifested in lower lung cancer rates.

Overall, however, life expectancy and health have demonstrated remarkable improvements in Japan. As mortality has declined throughout the 20th century, the members of each birth cohort have had a greater chance of surviving to any given age than did earlier cohorts. For example, a Japanese woman born in 1900 had a probability of 0.39 (or a 39 percent chance) of living to age 65, but a woman born in 1920 had a 0.55 probability of reaching 65. If survival to the oldest ages continues to improve, the aging of the Japanese population may be even greater than the government has projected.

If the Japanese continue to lower their mortality and raise their life expectancy, will they be healthier and have better as well as longer lives? This question is important to Japan and to all nations, especially with regard to providing medical care and household services for the elderly in need.

There is a common perception in Japan today that Japanese elderly are more likely to be bedridden than elderly in other developed countries, but there is

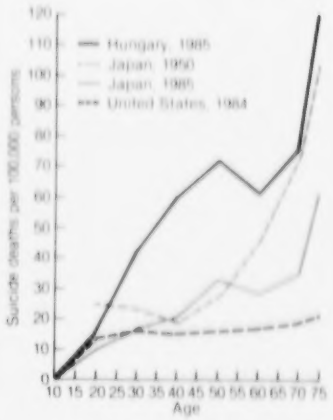
Box 1. Suicide

In 1988, the morning after the national holiday, Respect for the Aged Day, the *Japan Times* carried on page two an article with the following headline: Suicides of Three Elderly Mar Holiday Honoring Aged. One woman, aged 81, who hung herself from a bridge, was believed to have been exhausted from caring for her 86-year-old husband, who had been bedridden for 20 years. Another woman, aged 63, jumped from the seventh floor of a hospital where for two years she had been staying for treatment for Parkinson's disease. A man aged 85, hanged himself in a park and was supposedly despondent because of illness. Given the very public nature of these deaths, were these individuals making a statement about the plight of Japanese elderly?

Traditional Japanese culture has been more tolerant of suicide than Western culture. However, the incidence of suicide in Japan has declined in the postwar period, and the suicide rate in 1985 of 19.4 per 100,000 was lower than that of France, Denmark, and West Germany, though higher than that of Australia, Canada, England and Wales, Iceland, Sweden, and the United States.

In Japan, as in many developed countries, the suicide rate increases with age, as shown in the figure. This pattern is particularly marked in Hungary, the country with the highest reported suicide rate. However, Japan has experienced a decline in old-age suicide rates in the post-World War II period. Japan shares another characteristic of suicide common in other developed countries: Males are more than twice as likely to commit suicide as females. But this sex differential declines among the elderly. In 1985, the suicide rate of Japanese females of all ages was 50 percent of that for males, but for ages 65 and over, it was 70 percent. Among Western countries, only Hungarian females ages 65 and over have a higher suicide rate than older Japanese females—56 versus 39 per 100,000. Among the three other East Asian countries with death rates by cause published by the World Health Organization, Hong Kong and Singapore have comparable suicide rates for older women. The 1985 rate for South Korea is much lower—11 per 100,000 women ages 65 and over.

Suicide Death Rates by Age for Japan, 1950 and 1985, Hungary, 1985, and the United States, 1984



Sources: Japan—Japan Ministry of Health and Welfare, *Vital Statistics 1986*, Vol. 1 (Tokyo, 1987); Hungary—World Health Organization, *1986 World Health Statistics Annual* (Geneva, 1986); United States—World Health Organization, *1987 World Health Statistics Annual* (Geneva, 1987).

Although the causes of suicides cannot always be known precisely, the National Police Agency reports that of those 60 and over who killed themselves in 1987, over 70 percent did so because of ill health. In 1978, elderly in Tokyo who were living alone had a lower rate of suicide than those living with their children and grandchildren, perhaps indicating that the stress for those living in a multigenerational household is no less than for those living alone.[1]

Reference

1. Ueno, Masahiko, Munesuke Shoji, Masahiro Asakawa, Masae Ohrui, Toru Kogure, Koichi Minekawa, Toshiji Makai, Setsuyo Nagasawa, Genichi Matsuzaki, and Masami Washino. "Suicide Among Elderly People Based on Records of the Tokyo Medical Examiner's Office." *Nihon University Journal of Medicine*, Vol. 40, No. 10 (October 1981, in Japanese) pp. 1109-1119.

no hard evidence. In 1981, among those ages 80 and over in Japan, about one in ten were bedridden.[13] The fear of senility has particularly captured the attention of the Japanese (see Box 2). Daisaku Maeda, a leading Japanese gerontologist, and his colleagues argue that because Japan, compared to most other

Box 2. Senile Dementia

Kookotsu no Hito (A Man in Ecstasy), Japan's best-selling novel of 1972, brought the issues of senile dementia and aging to the forefront of public debate. The book, which inspired a first-run movie, was published in English as *The Twilight Years*. The novel tells the story of a middle-aged working woman who rises to the challenge of taking care of her recently widowed father-in-law, who is becoming progressively more senile.

Senile dementia, a form of organic brain syndrome, affects only about 4.5 percent of the non-institutionalized 65 and over urban population, which is probably less than in other developed countries. Also in Japan, fewer cases are of the Alzheimer's type and more are of a vascular nature, consistent with the importance of cerebrovascular disease in Japan.[1] Nevertheless, senility represents the worst fears about aging among the Japanese. A *Japan Times* editorial of July 1, 1983, states, "The problem of the aged, so-called, should be redefined as the problem of the senile."

Of greatest concern is the stress placed on families, especially wives and daughters-in-law, as depicted in *The Twilight Years*. Besides suffering the problems of disorientation and mindless wandering, elderly with senile dementia are also more likely to be bedridden, thus requiring greater care than the average elderly person. A 1987 Tokyo Metropolitan Government study of care-givers of the demented elderly found that 78 percent suffered anxiety about their own health, 76 percent mentioned mental exhaustion, and 61 percent expressed a desire to place the elderly person in an institution.[2] In fact, there is some evidence that an increasing proportion of the demented elderly with senile dementia are being placed in institutions,[3] a trend very much in conflict with traditional Japanese values of filial piety.

References

1. Maeda, Daisaku, R. Teshima, H. Sugisawa, and Y.S. Asakura. "Aging and Health in Japan." *Journal of Cross-Cultural Gerontology*, Vol. 4, No. 2 (in press).
2. Ibid.
3. "Tokyo's Senility Cases at Home Show Rise, But Percentage Drops from 1980 Survey." *Japan Times* (May 28, 1988) p. 2.

developed countries, has relatively more stroke victims, who often require long convalescent periods, there may be greater disability among elderly Japanese. They also note that rehabilitation services in Japan are relatively poor. Furthermore, more Japanese live with their children, possibly removing an incentive for the disabled elderly to recover independence.

Family Relations

Marital Status

The family situation of the elderly is also influenced by mortality. A majority (59 percent) of Japanese females ages 65 and over are widows, while a majority of males (82 percent) are married. As shown in Figure 3, widowhood increases substantially with age for both men and women. Because women live an average of six years longer than men and most elderly women are three to four years younger than their husbands, a majority of women outlive their husbands.

Elderly men are much more likely to remarry than women. The excess of women at older ages is the most obvious reason for this difference. But, there are also cultural reasons why women may be reluctant to remarry. While there are no specific secular or religious proscriptions against remarriage of women, there is some sense that a widow should remain loyal to her deceased husband.

Most older widows (and widowers) in Japan today have experienced only arranged marriages. In 1988, two-thirds of currently married women ages 60 and over were in arranged marriages, compared to only one-third of married women in their 30s, according to a 1988 *Mainichi Newspaper* and Nihon University national survey. The survey also revealed that the elderly, particularly older women, find the idea of remarriage less attractive than do younger persons, al-

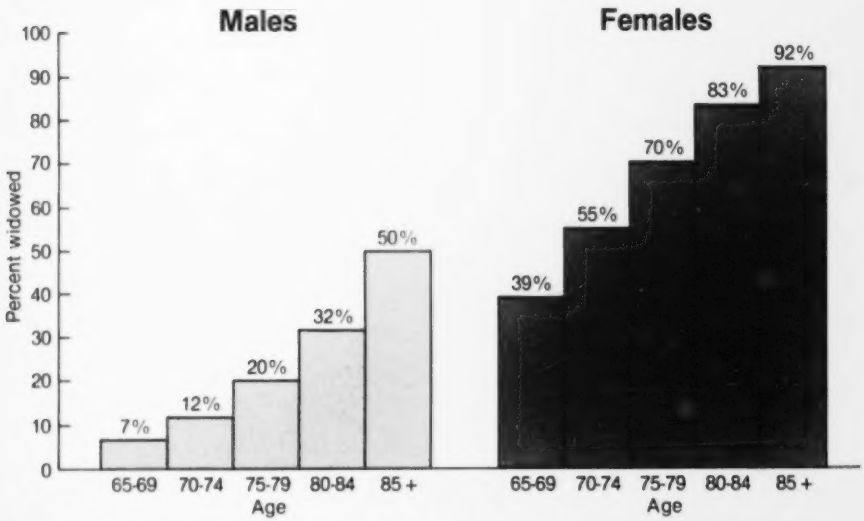
though age may account for a part of this difference in attitudes among the generations. Seventy percent of men and 64 percent of women in their 20s said that they would like to remarry if they became single in old age. Among the 60 and over population, however, only 25 percent of men and 9 percent of women responded positively.

Besides the shortage of eligible older males and the social stigma attached to remarriage, some older women experience a sense of relief at the loss of their husbands and are not eager to marry again. Given the strong sexual division of labor in Japan in which in theory the woman controls all aspects of the household, including finance, and the man is in charge of the outside world, the extended period of retirement of Japanese males and longer life expectancy have placed considerable strain on marriages of long duration.[14]

Many older Japanese men have not developed interests outside work and almost all expect to be waited upon and have someone with them when at home. Consequently, they are very dependent on their wives after retirement. In the popular Japanese media these retired men have become known as *sodaigomi* or "big trash," which has even more negative connotations than the American term "couch potato."

Takie Lebra, a Japanese-American anthropologist, has noted, "Some elderly women, still married, envy their widowed peers."[15] The proportion of divorces that occur after at least ten years of marriage increased from 24 percent in 1970 to 44 percent in 1986. The proportion of divorces occurring after 20 years increased from 5 to 13 percent over the same period.[16] Although some of this change is due to the aging of the population, it may also reflect an increase in marital stress among older retired couples.

Figure 3. Widowhood by Age for Males and Females: Japan, 1985



Source: Japan Statistics Bureau, *1985 Population Census of Japan*, Vol. 2, Part 1 (Tokyo, 1986) p. 62.

Multigenerational Households

The decline in mortality in the 20th century has lengthened the number of years that parents and their adult children are alive at the same time. Given this change, an increase in the percentage of elderly parents who live with their adult children might be expected, if past preferences persisted and there were no new constraints on living arrangements. In fact, just the opposite has been the case.

In the traditional stem-family structure, the eldest son brings his wife into his parents' home when he marries. The two generations live together until the parents' deaths, and the son inherits his parent's assets. Daughters and younger sons form their own households. If there is no son, the oldest daughter's husband may be adopted into the family and he plays the role of the eldest son. This pattern of postnuptial residence has weakened in recent years. Of eldest sons who married in 1960-64, 58 percent lived with their parents after marriage, whereas for the eldest sons who married in 1980-82, only 41 percent resided with parents.[17]

Similarly, the percentage of the elderly living with adult children has declined sharply in recent decades, as shown in Figure 4. Between 1970 and 1985, the percentage of the noninstitutional population ages 65 and over living with children fell from over three-quarters (77 percent) to less than two-thirds (65 percent). Instead, more and more elderly live with their spouse only or alone.

The living arrangements of elderly individuals vary according to marital status, sex, age, and type of residential community.[18] Not surprisingly, widowed or divorced elderly are more likely to live with their children than are those who are still married. Women are less likely than men to live with their spouse only, and more likely to live with children or alone. Living alone increases with age initially, probably reflecting the rise in widowhood as the elderly age, but this trend is reversed at very old ages. In 1985, the percentage of elderly living alone peaked at ages 70-74. The elderly living in cities—about 70 percent of the 65-and-over population—are less likely to live with their children and more likely to live with a spouse or alone.

Only about 5 percent of the 65-and-over population were not living in an ordinary household at the time of the 1985 census: 2.6 percent were in a hospital, 1.6 percent in an institution, and 0.4 percent in a boarding house or some other setting.

In most Asian countries, about three-quarters of the elderly live with their children, about the same percentage as in Japan in 1970.[19] In the United States, however, more elderly live alone or with their spouses. In 1987, over 30 percent of the noninstitutionalized American population over age 65 lived alone. Only about 5 percent of the American elderly reside in nursing homes.[20]

The decline in the percentage of Japanese elderly living with their children may simply represent a *delay* in co-residence, perhaps until the elderly person is widowed or frail. Nevertheless, cohort trends in living alone and in non-ordinary households indicate that an increasing proportion of the elderly of all ages will

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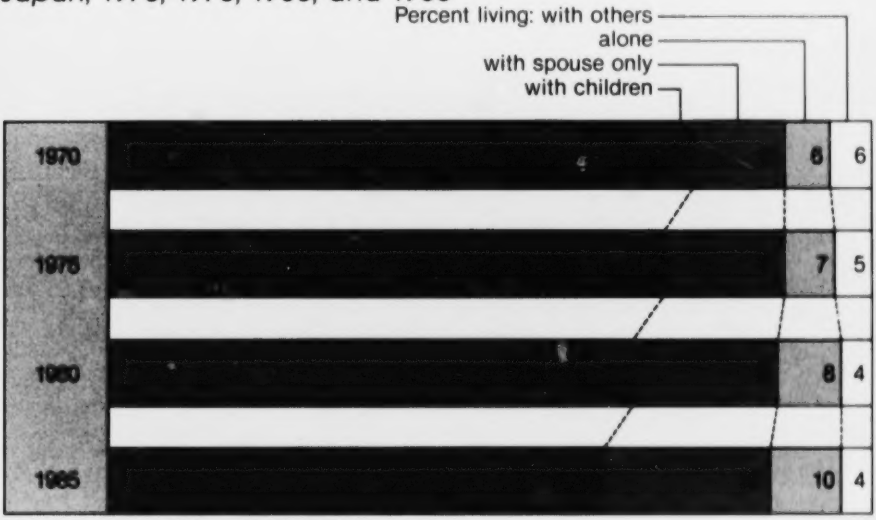
An increasing proportion of elderly may live apart from family members in the future.

Figure 4. Living Arrangements of the Population 65 and Over: Japan, 1970, 1975, 1980, and 1985*



*Population living in ordinary (noninstitutional) households

Source: Japan Statistics Bureau, *Population Census of Japan*, 1970, 1975, 1980, and 1985 (Tokyo)

live apart from family members in the future. For example, only 9.6 percent of the women born between 1900 and 1905 lived apart from their families when they were ages 65 to 69 in 1970. By 1985, however, when they were ages 75 to 80, the percentage had doubled to 19.3.

Attitudes about Family Support

Young and old Japanese alike appear to be less certain about a child's obligations to support aging parents. Although support is not necessarily equivalent to coresidence, these changing attitudes may point to further declines in the percentage of elderly living with children. The *Mainichi Newspaper*'s biennial surveys of wives of childbearing ages show that the proportion planning to depend on their children in old age has declined from 55 percent in 1950 to 18 percent in 1988. Similarly, the proportion indicating that it is a good custom or natural for children to take care of their elderly parents has declined from 75 percent in 1963 to 63 percent in 1988.[21] In particular, the role of the eldest son is no longer clear. A 1988 survey indicated that only 32 percent of all adults thought it is the eldest son's duty to look after his parents, compared to 47 percent of those 60 and older who thought so.[22]

Nevertheless, the majority of Japanese elderly today still prefer living with their children. As shown in Table 3, a 1986 Japanese government-sponsored survey of persons ages 60 and over in five countries found that 58 percent of Japanese and 66 percent of Thais thought it best for the older and younger generations to live together, in contrast to 34 percent of Italians, 4 percent of Danes, and 3 percent of Americans. The relationship considered best in the three Western countries was living separately, but with meetings to eat and talk together, a pattern sometimes referred to

Table 3. Best Relationship Between Younger and Older Family Members According to Persons Ages 60 and Over: Selected Countries, 1986

	Japan	Thailand	Italy	Denmark	United States
Percent saying best relationship is:					
Live together	58.0%	65.9%	33.6%	3.8%	2.7%
Meet to eat and talk	39.5	31.3	65.0	92.0	95.5
Have no contact	1.5	1.6	1.0	0.2	0.3

Source: Japan Management and Coordination Agency, *Report on the International Comparative Survey on the Lives and Perceptions of the Elderly* (Tokyo, 1987; in Japanese) pp. 270-271.

as intimacy at a distance.

There were also substantial differences in the elderly person's desired care-provider in the event they became physically weak. Table 4 shows that between 88 and 96 percent of elderly Japanese, Thais, and Italians wanted to have family members care for them, whereas only 69 percent of Americans and 20 percent of Danes chose family members.

Just over half of elderly Japanese (51 percent) said that they would want their spouses to take care of them. Significantly, only 24 percent of females named their spouses, compared to 65 percent of males. The care-giver most favored by elderly women was a daughter-in-law—preferred by 29 percent—which is what one would expect within the traditional stem family. Even

Table 4. Preferred Care-Giver If Become Physically Weak According to Persons Ages 60 and Over: Selected Countries, 1986

	Japan	Thailand	Italy	Denmark	United States
Percent who prefer:					
Family	95	96	88	20	69
Spouse	*51*	*18*	*38*	*13*	*36*
Son	*12*	*26*	*13*	*1*	*6*
Daughter	*14*	*42*	*28*	*4*	*18*
Daughter-in-law	*16*	*1*	*3*	*1*	*1*
Son-in-law	*z*	*1*	*z*	*z*	*z*
Sibling	*1*	*3*	*4*	*1*	*5*
Other	*1*	*6*	*3*	*z*	*3*
Neighbor or friend	3	6	7	1	18
Community group	5	1	9	2	15
Public agency	15	9	14	30	9
Private agency	5	1	6	39	41
Other No answer	1	1	2	10	9

Note that multiple responses to major categories are allowed; only the first-choice family member is indicated for those who chose family as one of the major categories.

z = less than 0.5 percent

Source: Japan Management and Coordination Agency, *Report on the International Comparative Survey on the Lives and Perceptions of the Elderly* (Tokyo, 1987; in Japanese) pp. 292-295.

so, almost as many (23 percent) said they wanted their own daughters to take care of them—a significant departure from the ideal.

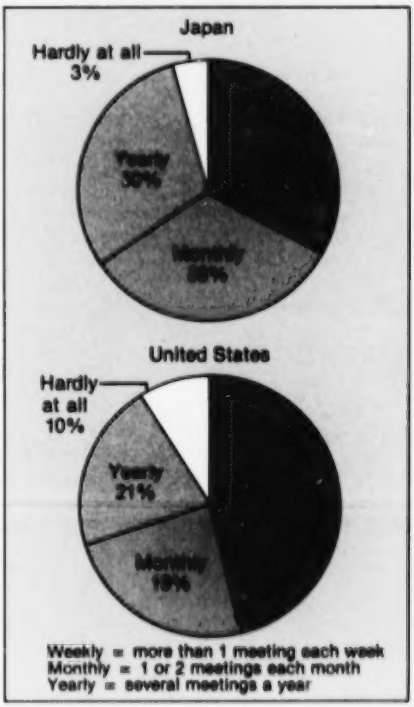
The expressed willingness of family members to care for the elderly also differs considerably across cultures. For example, a study in the late 1970s found that 90 percent of Japanese would take care of an older woman if she were the person's mother, but only 19 percent would care for an elderly aunt and 8 percent for an elderly friend. In contrast, 84 percent of Americans would care for an older mother, 69 percent for an aunt, and 52 percent for an elderly friend.[23] Americans and Japanese revealed similar differences regarding care for an elderly man. Thus, a sense of obligation toward the elderly in America applies to a wider array of individuals than in Japan, including friends as well as family.

Contact with Children

Japanese and American elderly persons also report differences in the frequency of contact with adult children and in the perception of their children's interest in their well-being. As shown in Figure 5, about 15 percent of each group report that they meet almost every day with children with whom they do not live, but 36 percent of Americans report meetings of at least once a week, while only 19 percent of Japanese do.

On the other hand, a larger percentage of American than Japanese elderly reported having hardly any contact with their adult children who live apart from them. Nevertheless, the same survey found that 84 percent of Americans reported that their children were very interested in their well-being, whereas only 67 percent of Japanese did so. Thus, although many more elderly Japanese than Americans live with their adult offspring, the intimacy at a distance, which American elderly prefer and apparently have, seems to leave them feeling of greater importance to their children.

Figure 5. Frequency of Visits with Adult Children[a] by Japanese and Americans Ages 60 and Over, 1986



[a] Children with whom the respondents did not live

Source: Japan Management and Coordination Agency, *Report on the International Comparative Survey on the Lives and Perceptions of the Elderly* (Tokyo, 1987, in Japanese) pp. 268-269.

Incentives for Family Support

As mentioned earlier, in the ideal Japanese stem-family system, the eldest son was expected to inherit all his father's assets. Under the American occupation after World War II, the Japanese constitution was revised to specify that if

there is no will, a surviving wife would receive one-half of the assets and that the rest (with the exception of farmland) would be divided equally among all children. A will can specify some other division for half the assets, but the rest must be divided as indicated above. Nevertheless, shares may be renounced, and more than twice as many women as men do so.[24] Renunciation of inheritance is sometimes used to ensure that the bulk of the family estate goes to the child who promises to care for a surviving parent.

Using inheritance as compensation for services rendered is gaining popularity in Japan, the biennial *Mainichi Newspaper* family planning surveys indicate. In 1963, 18 percent of wives of childbearing age said that they would leave their property to the children who took care of them and their husbands; by 1977, the percentage giving this answer had increased to 32. Support for compensatory inheritance is most popular among women, the more educated, and those living in urban areas. Income tax credits for taking care of an elderly parent and government loans for home remodeling or building to care for an elderly person also provide some incentives for caregivers, although the amounts involved are relatively small.[25]

Work, Retirement, and Economic Well-Being

Many Japanese elderly can support themselves. In fact, as a group, they are more likely to work than the elderly in any other developed country.[26] In 1987, 36 percent of males and 15 percent of females age 65 and over were in the labor force in Japan. In the same year, only 16 percent of older men and 7 percent of older women were in the U.S. labor force.[27] Nevertheless, the percentage of older Japanese who work has declined over the last few decades as the labor force has moved out of agriculture and as

Diane Gruenstein

Compared to other developed countries, a high proportion of Japan's elderly continue to work.

public pensions have improved.

The pattern of male labor force rates by age and the decline in work activity for both sexes at the youngest and oldest ages, shown in Figure 6, are typical of developed countries. For 1960, 1970, and 1987, the rates for males are uniformly high in the prime working ages, while rates at the extremes of the age distribution are lower and have declined over time. The percentage of young people who work has declined because Japanese youth are spending more years in school. In 1960, less than 60 percent of lower secondary school graduates advanced to high school, while in 1986 over 94 percent did. Similarly, the percentage advancing from high school to higher education increased from 20 to 26 percent for males and from 14 to 34 percent for females.[28]

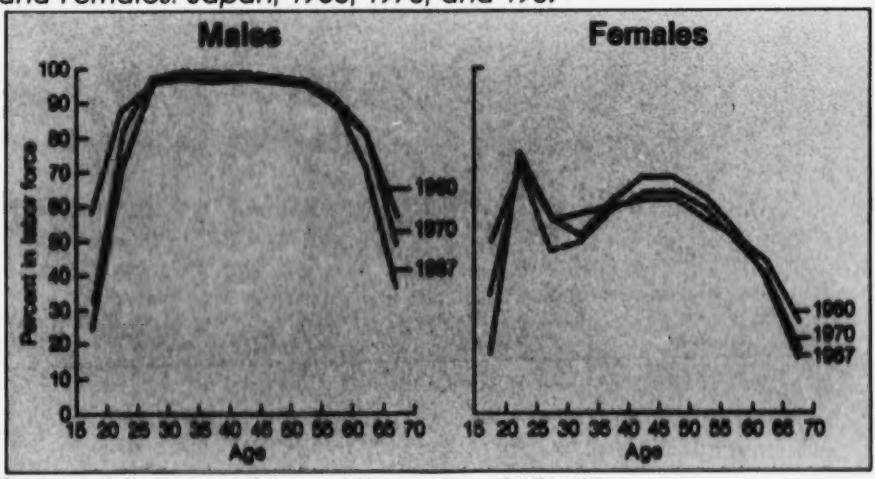
The pattern of female participation rates by age has an M-shape, which is not typical of most other developed countries. Until recently, Japanese women were expected to leave paid employment when they got married or when their first

child was born. Some women reentered the labor force after raising their children, thereby creating the second peak of the M. Rates have declined over time at the extremes of the age distribution, but the middle ages have a mixed pattern. From the 1950s until the mid-1970s, the female labor force participation rate fell as the incidence of unpaid family work declined. Since then, however, the increasing number of women who are paid employees has outweighed this decline, and the female labor force participation rate has increased overall. In 1985, the Diet passed an Equal Employment Opportunity Law to address the broad range of discrimination against women in hiring, wages, promotion, and retirement, but it is too soon to tell how effective it will be.

Another important development in the Japanese work force is the growing importance of part-time work (less than 35 hours per week). The highly publicized "lifetime employment" system of Japan actually applies only to a limited number of men who work for large companies. In recent years, when employers needed to hire workers, but were uncertain about the economic future and wanted to avoid having to pay full benefits and making a commitment to new lifetime employees, they have hired part-time workers. Women and the elderly have filled many of these positions. The proportion of part-timers among employees of firms with five or more employees grew from 3 to 9 percent between 1975 and 1986.[29] Almost a third of all women, over half of women over age 65, and over a third of men over age 65 who were employed in 1987, were working part-time.

The elderly tend to work at different types of jobs than younger workers. Many older people work in the primary sector where retirement is more at the discretion of the individual. In 1987, over one-third of elderly men were working in agriculture, fisheries, and forestry, compared to only 5 percent of the 40-54-year-old men and 17 percent of the men

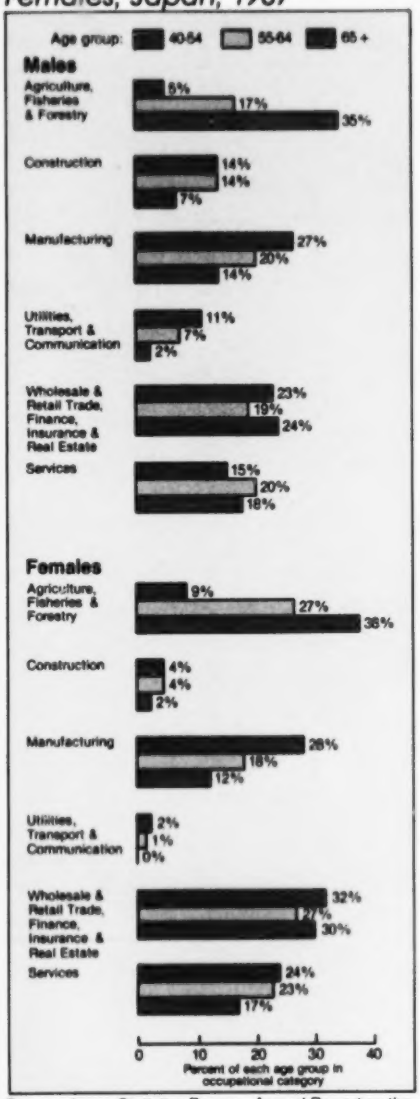
Figure 6. Labor Force Participation Rates by Age for Males and Females: Japan, 1960, 1970, and 1987*



*The rate equals the percentage of persons working or seeking work within each age group.

Source: Japan Statistics Bureau, *Annual Reports on the Labour Force Survey*, 1987 and 1970 (Tokyo, 1988 and 1981).

Figure 7. Selected Age Groups of Workers by Major Industry: Males and Females, Japan, 1987



Source: Japan Statistics Bureau, *Annual Report on the Labour Force Survey*, 1987 (Tokyo, 1988).

ages 55-64, as shown in Figure 7. The percentage of women in the primary sector also increases with age.

Conversely, the importance of construction, manufacturing, and the utilities, transportation, and communication industries all decline with age for both men and women. The service industry, wholesale and retail trade, finance, insurance, and real estate are important employers of elderly workers. About 42 percent of males and 47 percent of females 65 and older worked in one of these industries in 1987.

There is debate about the reasons for the relatively high labor force participation of the Japanese elderly. Besides the relative importance of the primary sector in Japan, some point to the fact that until recently public pension benefits were meager and not universally available. Others have attributed the high participation to Japan's strong work ethic and work-group orientation.[30] The government-sponsored 1986 cross-national study of the elderly indicated that of those working, over 90 percent of Americans and Japanese said that they wanted to continue working (though the percentage of Japanese actually working was twice that of the Americans). Forty-two percent of the Japanese, but only 18 percent of Americans who wanted to continue working cited health reasons. Just over one-third of both Japanese and Americans (39 and 37 percent, respectively) worked primarily to earn income, but far fewer Japanese than Americans (8 versus 41 percent) said they worked for the enjoyment of it. Thus, financial considerations played relatively equal roles across countries, but the non-financial reasons given were quite different. Japanese expressed concern about health, while Americans emphasized their enjoyment.

Elderly Americans also place more emphasis on enjoyment as a reason for *not* wanting to continue working. Of those wanting to quit, 83 percent of Americans cited wanting to enjoy a leisurely life, while only 54 percent of Japanese did so.

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Many Japanese elderly work in the primary sector, the fishing industry, for example, where retirement is more at the discretion of the individual.

Japanese were five times as likely as Americans to mention poor health as the reason for wanting to quit (31 versus 6 percent, respectively). Nevertheless, the desire for a leisurely retirement seems to be growing in Japan (see Box 3), just as it is in the United States. In a similar 1981 survey, only 46 percent of Japanese and 72 percent of Americans who wanted to retire said it was to enjoy their leisure.

Lifetime Employment and Mandatory Retirement

For elderly Japanese who want to continue working in the nonagricultural sector, considerable effort and sacrifice may be required. The famed Japanese lifetime employment system excludes a large proportion of the labor force. Furthermore, relatively low mandatory retirement ages, combined with high life expectancy, imply a lengthy retirement life of up to 20 years.

In 1987, there were 60.8 million Japanese in the labor force of which 59.1 million were working. Only 39.4 million or 65 percent of the total labor force were "regular" employees or workers who might be eligible for lifetime employment. Excluding the female regular employees, whose careers are usually interrupted, only 26.5 million employees were likely to have the benefits of lifetime employment[31]—less than half of the Japanese labor force.

The lifetime employment system was instituted between the two world wars when there was a shortage of labor and a need to ensure company loyalty—especially among skilled workers that a company had trained. Under the system, a worker joins a company upon graduation from school at a starting salary based on his education and sex and on the size of firm. Salary increases are a function of longevity, although there are also allowances for dependents and special duty. In addition, there is overtime pay at a rate of 1.25 times base pay and there are usually bonuses twice a year based on the monthly wage. In 1986, the average combined bonuses for workers were the equivalent of about

Box 3. Leisure

Although over 40 percent of the 60-and-over population ostensibly belongs to senior citizens' clubs,[1] elderly Japanese seem to be somewhat at a loss about what to do with their leisure time. Even allowing for the fact that about twice as many work as in the United States, American elderly are much more involved with hobbies and activities outside the home. The 1986 crossnational survey of persons 60 and over found that the percentage of Americans involved *frequently* in clubs or hobby groups was almost five times as great as the percentage of Japanese (26.4 versus 5.6 percent). The ratio of Americans to Japanese involved in religious activities was over 8, attending social gatherings over 20, engaging in sports nearly 4, and serving as community volunteers or being active in senior day centers about 2.

Also indicative of the degree of social integration in old age is the finding that the Japanese have fewer friendly chats with people in their neighborhoods. Almost 50 percent of Thais and almost 40 percent of Americans, Italians, and Danes reported daily conversations with neighbors, while less than 20 percent of Japanese did so. Close to one-third of elderly Japanese reported hardly any neighborhood contact, in contrast to only 7 percent of Americans.

However, it is likely that the retirees of the future will have had more experience in leisure activities prior to old age than the current generation of Japanese elderly. Japan is gradually moving toward a five-day work week from the standard five-and-a-half-day week. Furthermore, in 1987 the Labor Standards Law was revised to provide guidelines for the maximum hours to be worked each week without overtime pay, although the implementation of the guidelines will be at the discretion of the Ministry of Labor. The revised law also makes it illegal to punish workers who take their full entitlement of vacation days.

One motivation for reducing hours of work is to increase domestic consumption and thus reduce the trade surplus. Another is the sense that the Japanese quality of life has not kept pace with economic growth and that it is time for the Japanese to enjoy more of the fruits of their labor, as citizens of other developed countries have. Nevertheless, some firms are resisting the reduction of working hours because they have relied on the flexibility in working hours to adjust to changes in economic conditions, rather than hiring and firing lifetime employees. There is also some concern that the *shinjinrui* or new human race of young people, who have been born into affluence, might begin to take leisure too seriously, but the slow pace of change thus far should quiet those fears.[2]

In 1986, 28 percent of workers in firms with 30 or more employees were working only 5 days a week—up from 21 percent in 1975. About half the workers—if not enjoying a five-day work week—at least were taking off one to three Saturdays per month.[3] Similarly, the "enforcement" rate for summer vacations (the proportion of firms *requiring* workers to take their summer holidays) increased from 72 to 80 percent between 1980 and 1986, but the average number of days off remains small—only 3.3. Including national and other holidays, the average annual number of days off increased only from 16.8 to 17.4 days over the 6-year period. Futhermore, total hours worked, including overtime, have not changed significantly in the 1980s.

References

1. Japan Ministry of Health and Welfare. *1988 Health and Welfare Statistics in Japan* (Tokyo: Health and Welfare Statistics Association, 1988) p. 136.
2. Luffy, Carol. "Tokyo's New Human Race Has a Mild Face." *Far Eastern Economic Review* (November 12, 1987) pp. 56-58.
3. Japan Institute of Labour. *1988 Japanese Working Life Profile: Statistical Aspects* (Tokyo: 1988) pp. 39-42.

three-and-a-half months' wages. In return, the worker is expected to stay with the same firm throughout his career, to undergo considerable on-the-job training, and to do whatever jobs are asked of him.

The catch to all this security for the chosen workers is that until recently it

usually ended at age 55. Table 5 shows the age limits of firms with 30 or more employees and uniform* mandatory retirement systems between 1968 and 1987. In 1968, nearly 64 percent of firms with uniform systems required that employees retire at age 55 or younger.

When the lifetime system was first instituted, age 55 was consistent with life expectancy, so it was a reasonable age limit. But in the 1970s, with higher life expectancy and aging of the population, the Japan Ministry of Labor began to pressure companies to raise the age limits. (See Box 4 for a review of Japanese employment policies for older workers.) By 1987, over half the firms were specifying 60 years as the age limit. Also, the percentage of firms with uniform systems grew from 51 to 80 percent. Unlike the United States, Japan has no general law with regard to mandatory retirement or the age limit, and only in the 1980s have sex differences in mandatory retirement—forcing women to retire earlier than men—been ruled illegal.

*A *uniform* retirement system does not differentiate by sex or occupation.

Retirement Allowances

In 1985, 89 percent of firms with 30 or more employees gave retirement allowances—over half of these firms gave lump-sum payments only, while 14 percent gave pensions, and the rest gave a mix of the two, often leaving the choice to the employee. The type of retirement allowances available to employees has changed considerably in recent years. In 1966, most (over 85 percent) were in the form of lump-sum payments, almost none were pension schemes, and about 13 percent offered a combination.[33] Since that time pension plans have become more popular because tax advantages for pension funds held outside firms have been instituted, and because pensions also allow employers to spread out payments to retirees. However, private pensions are not for the lifetime of the employee, but for a fixed period, usually about ten years. The average value of the retirement allowance ends up being more or less the same, no matter what the form. Many Japanese workers prefer the lump-sum option because

Table 5. Retirement System and Age Limit in Firms with 30 or More Employees: Japan, Selected Years

	1968	1974	1980	1987
Percent of firms with age limit	69	67	82	89
Percent of firms with uniform system	51	44	60	80
Age limit in firms with uniform system (percent)				
- 55 years	0.3	0.3	0.2	0.3
55	63.2	52.0	39.5	23.0
56-59	14.2	12.3	20.1	18.0
60	22.3*	32.4	36.5	53.9
61-64		0.4	0.7	2.3
65 +		2.6	2.5	2.5
Total	100.0	100.0	100.0	100.0

*60 and over

Note: A *uniform system* means that there are no differences on the basis of occupation or sex.

Source: Japan Ministry of Labour, *Employment and Management Survey*, various years.

they may have very specific plans for its use, there are tax advantages to taking the lump sum, and they may have doubts about the pension maintaining its value.

The amount of the retirement allowance is based on years of service, occupation, education, sex, and the last basic monthly salary. In 1985, the average retirement allowance for a male high-school graduate in an administrative, clerical, or technical job with 35 or more years of service was equal to about 4 years' worth of his last basic monthly pay.

Given the link between salary increases and longevity in the seniority-wage system and between retirement allowance and length of service and last salary, many firms have been reluctant to raise the age limit. But government and social pressure to do so has been strong. In fact, at the same time that some firms have raised their age limits, they have adjusted their formula for calculating retirement allowances to minimize the extra cost of keeping on the older workers.[34] Also, the aging of the labor force has reduced the salary advantage of

Box 4. Employment Policies for Older Workers

In the 1970s and early 1980s, the government focused on encouraging firms to raise their retirement age limits to at least 60 years. With the passage in April 1986 of the Law Concerning Stabilization of Employment for Older Workers, the emphasis shifted to raising age limits to 65 years. Actually, the 1986 law has three major components: (1) promotion of continued employment up to age 65, working from a base of 60; (2) promotion of reemployment of "retired" workers; and (3) assistance in preparation for retirement and job placement programs for older workers.

Although the Diet rejected a tougher version of the law in which mandatory retirement below age 60 would have been illegal,[1] the law does stipulate that a firm that sets a below-60 retirement age must give proper cause, such as poor business performance. If there is not a good reason, the firm will be given "administrative guidance" by the Ministry of Labor in developing a plan for raising the age limit. Those who do not comply will have their names made public. Firms are also encouraged to ensure that at least 6 percent of their regular employees are aged 60 to 64. Incentives of 20,000 yen (US $160 using a late 1988 exchange rate of 125 yen per dollar) per month will be given to firms for each worker aged 60 to 64 exceeding the 6 percent target. Similar subsidies will be given for workers whose employment is continued beyond an official age limit of 60.

Measures for promoting reemployment of older workers also include subsidies to employers who hire employees ages 60 to 64 through Public Employment Security Offices. One-fourth to one-third of the newly hired older employee's wage is paid for one year, depending on the size of the firm. There are also lump-sum bonuses that can range up to nearly $5,000 for each worker hired within 3 months of retirement through the out-placement effort of the previous employer.[2] Once again, the Ministry of Labor may give guidance to firms to help them formulate plans for reemployment programs.

Finally, subsidies are given to firms for training middle-aged and older workers in preparation for retirement, and the government is supporting in each municipality Silver Human Resource Centers, which are voluntary organizations set up to assist older workers in finding part-time and temporary jobs. There are already over 300 of these centers, which specialize in low-level jobs such as supervising parking lots, cleaning parks, and distributing leaflets, with pay of about 30,000 to 40,000 yen (US $240-$320) per month.[3]

References

1. Watanabe, Akira, "Mandatory Retirement Age System and Enactment of New Law for Securing Employment for Elderly People," *Japan Labor Bulletin*, Vol. 25, No. 12 (December 1986) p. 7.
2. Osako, Masako, "Japan's Programs for Expanding Employment of Older Workers," *Productive Aging News*, Issue 25 (New York: Mount Sinai Medical Center, July-August 1988) pp. 3-4.
3. Kamata, Satoshi, "Life After Retirement," *Japan Echo*, Vol. 15, Special Issue (1988) p. 33.

more senior workers, although general economic conditions, among other factors, also influence the relative salaries of younger and older workers.[35] Some firms, large employers in particular, have also begun offering early retirement incentives, even as they have raised their age limits. Only about 4 percent of firms with 30 or more employees offered such incentives in 1986, but over half the firms with 5,000 or more employees, and 40 percent of firms with 1,000-4,999 employees offered early retirement incentives.[36]

Reemployment and Unemployment

In spite of the relatively low age limits and some incentives to retire early, a substantial proportion of older Japanese continue to work. Of those not working, many would like to work: 63 percent of those 55-59 and not working, 55 percent of those 60-64, and 39 percent of those 65-69 would like to work, according to a 1983 Ministry of Labor survey.[37] How can they find jobs after they have "retired" or reached the age limit?

In 1986, almost 70 percent of firms with 30 or more employees had systems for reemploying or extending the employment of the elderly.[38] The employee, however, usually must agree to a cut in pay, a loss of title, and no guarantee of continued employment. In the largest firms, employees reaching or approaching the age limit are frequently reemployed in subsidiary firms. This practice of transferring older employees is manifested also in moves from government agencies to contractors' firms, in which case the transferees are known as *ama kudari* or people who have come down from heaven.

Employees of smaller firms, as well as the substantial number of workers who have never been part of the lifetime employment system, have far fewer options. Often these workers must not only change jobs, but also change industries or occupations in order to find employment. Extended periods of unemployment are not uncommon. Among the unemployed ages 55 and over in 1986, 28 percent reported having been unemployed for more than 1 year and 31 percent for 6 to 12 months. Among the unemployed of all ages only 17 percent were without jobs for more than a year and 22 percent for 6 to 12 months.[39]

T. Sasaki

The excess demand for younger workers and excess supply of older workers have created imbalances in Japan's labor force.

The difficulties that older Japanese have in finding jobs are also reflected in the age pattern of unemployment rates. The overall unemployment rate in Japan remains low relative to other developed countries, even when differences in measurement are taken into account.[40] In 1987, Japan's unemployment rate was 2.8 percent, less than half that of the United States (6.2 percent). Older Japanese males, however, had higher unemployment than did American males, particularly the 60-to-64-age group in which 7.6 percent of Japanese males

were unemployed, whereas only 3.6 percent of American males were.

One way to assess the unemployment problems of the elderly within a country is to compare their rates with those of an age group that typically has low employment: the 45-49-age group. Figure 8 shows the ratio of the unemployment rate by age to the unemployment rate for the 45-49 group for males in Japan and the United States.

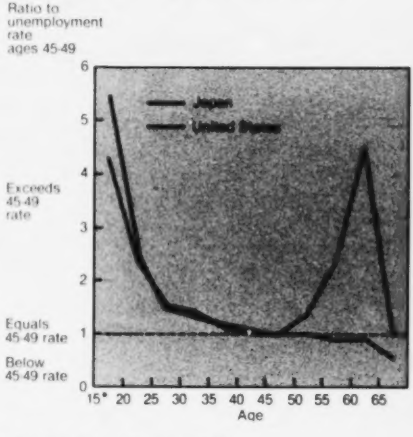
Even though there may be slight differences between countries in the calculation of unemployment, it should be noted this index by age is calculated relative to unemployment in each country and thus provides a means of comparing age patterns of unemployment across countries. Up to the late 40s, the age patterns of unemployment of males in Japan and the United States are remarkably similar. Unemployment is relatively high at the youngest ages and then declines.

Above age 50, however, the age patterns diverge considerably. In the United States, unemployment continues to decline with age, but in Japan, there is a new peak of unemployment in the 60-64 group, where the unemployment rate is 4.5 times that of the 45-49 group. Even though Japan's overall unemployment rate is relatively low, unemployment affects the elderly in Japan much more than in the United States.

The excess demand for younger workers and excess supply of older workers is reflected in the Public Employment Security Offices' ratio of job openings to job applications for regular positions by age. In 1986, there was only 1 opening for every 10 applicants in the 55 and older group, compared to 7 to 11 openings for every 10 applicants in the age groups between 20 and 35. For those 19 and younger, there were 14 openings for every 10 applications.

Another indication of the imbalance between supply and demand for the various age groups of workers is the rather extreme behavior of some firms in attempting to hire younger workers. Each

Figure 8. Ratio of Unemployment Rate by Age to Unemployment Rate for Those 45-49, Japan and the United States, Males, 1987



* For the United States, 16-19.

Sources: Japan Statistics Bureau, *Annual Report on the Labour Force Survey*, 1987 (Tokyo, 1988); U.S. Department of Labor, *Employment and Earnings*, Vol. 35, No. 1 (January 1988).

year in September, firms can begin interviewing potential recruits who will graduate from college the following March. According to the Ministry of Labor's system, formal job offers are not to be made until October.

Because new graduates are in such great demand, in another recent development, some companies in 1988 used somewhat coercive tactics to keep the young people that they wanted to hire from having any contact with other firms. These tactics ranged from "daily detainment" for discussions at the company to trips to resorts in Japan or abroad.[41]

The experience of 1988 may have been exceptional since a number of firms found they had gone too far in slowing the growth of their work forces, expecting

that the high price of the yen on international markets would erode the demand for exports. Also, the college graduates of 1989 are a relatively small cohort since they were born in 1966, which, according to the traditional Japanese calendar, was the year of the fiery horse. Births were greatly reduced that year because of the superstition that females born then might kill their husbands.

Employers will have a larger pool of potential workers in the early 1990s when the members of the small echo of the short Japanese postwar baby boom begin to enter the labor force. However, in the long run with the aging of the labor force, the imbalances in the labor supply can only get worse unless there are significant changes in the Japanese employment system and changes in attitudes toward older and female workers. In 1985, the 50-64 group made up 28 percent of the population 20-64, the usual working ages. By 2000, according to the government's middle-series population projection, this older group will comprise 34 percent and by 2025, 35 percent of the working-age population.

Economic Well-Being

Despite the relatively difficult employment picture of today's elderly, most are financially comfortable, although they may have fears about whether or not their funds will last until the ends of their lives. When the Japanese respondents in the government's crossnational survey of the elderly were asked how difficult their economic circumstances were, 53 percent said not at all difficult, 31 percent responded a little difficult, and only 16 percent replied quite or very difficult, a pattern similar to the responses of the elderly in Denmark and the United States.

The youngest-old, or those elderly under age 75, played key roles in building Japan's postwar economic success (they were 40 to 49 years old in 1960). They have saved some of their earnings, at least in part, in preparation for their retirement. Nevertheless, it is this group, those approaching old age, who voice the greatest economic concerns. Of Japanese ages 60-64, 21 percent reported their economic situations were quite or very difficult, but among the oldest group, those 80 and above, only 13 percent gave the same answers. Those in the 60-64 group may still be experiencing retirement and employment difficulties, and they face longer lives and more uncertainty ahead of them.

It is difficult to measure the economic well-being of the elderly in Japan because most data from income and expenditure surveys are for households, not individuals, and are published by age of head of household. Given that over half the elderly live with their children, who may be listed as household heads, looking only at data for households with elderly heads may not accurately portray the situation of the elderly.

In 1986, household data did show that, among households headed by persons ages 65 and over, the average annual income was only 82 percent of the income of all households, and the elderly-headed households had only 1.02 earners per household in comparison to an average of 1.56 earners in all households.

Their assets were actually greater than average, valued at 148 percent of the national household average. Their liabilities were less, only 33 percent of the national average.[42] In particular, households with elderly members are more likely to own their own homes, according to 1985 census data.

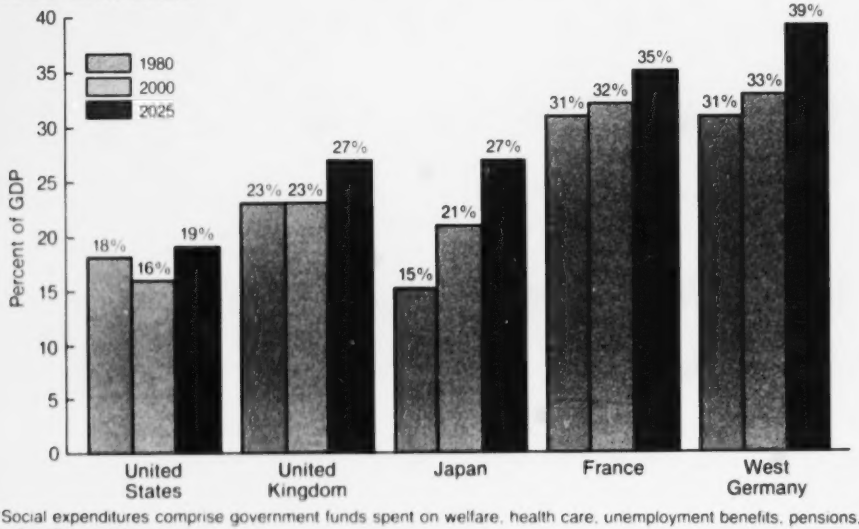
The public pension system is becoming increasingly important to the economic well-being of Japan's elderly. Between 1981 and 1986, the proportion of Japanese ages 60 and over reporting that a public pension was their major source of living expenses increased from 35 to 53 percent. The proportion of elderly relying most on earnings income fell from 31 to 25 percent and the proportion depending on children dropped from 16 to 9 percent.[43]

Social Expenditures

Although the proportion of national income that is devoted to social welfare in Japan is low in comparison to most other developed countries, it is increasing steadily. For example, in 1983 the ratio of social expenditures for persons of all ages (including medical care) to national income was 14 percent in Japan in comparison to 18 in the United States, 31 percent in West Germany, and 44 percent in Sweden.[44] Just 10 years earlier, only 6 percent of Japan's income went to social expenditures. By 2025, Japan is projected to spend 27 percent of its gross domestic product on social expenditures, surpassing the proportion spent by the United States and the United Kingdom, but still spending relatively less than West Germany and France, as shown in Figure 9.

Another measure of the increasing burden of social welfare is the ratio of the sum of taxes plus premium payments into the public pension scheme as a percentage of national income. The 1988 ratio for Japan was 37 percent, but it is projected to increase to about 45 percent by 2010, assuming that income grows by 4.0-5.5 percent per annum. The ratio of social security premiums alone to national income is expected to rise from 11 to about 18 percent.[45] These government projections are based on pension and medical care systems that have been revised recently in an attempt to alleviate some of the future financial bur-

Figure 9. Social Expenditure as a Percentage of Gross Domestic Product (GDP), United States, United Kingdom, Japan, France, and West Germany: 1980 and Projections to 2000 and 2025*



*Social expenditures comprise government funds spent on welfare, health care, unemployment benefits, pensions, and similar social programs.

Source: Peter S. Heller, Richard Hemming, Peter W. Kohnert, and a Staff Team from the Fiscal Affairs Department, "Aging and Social Expenditure in the Major Industrial Countries, 1980-2025," *Occasional Paper*, No. 47 (Washington, D.C.: International Monetary Fund, 1986).

dens associated with population aging, but further modifications may be necessary.

Public Pensions

The public pension scheme in Japan underwent a major revision in April 1986. Prior to that change, the majority of pension beneficiaries in Japan were participants either in the Employee Pension Insurance (EPI) or the National Pension (NP) schemes.[46] The EPI was founded in 1941 and covered workers in firms with five or more employees. The NP scheme, established in 1959, covered self-employed workers and employees of smaller firms. The 1986 reform was designed to merge the two schemes, to gradually reduce benefits so the contribution rates in the 21st century would be only three times the present rates, rather than four as projected, and to establish the right of women to pension benefits on their own, not just as dependents of employees.

Under the new scheme, everyone in Japan between the ages of 20 and 60 is a compulsory member of the NP scheme (persons ages 60-65 may choose to contribute to the system). Premiums in 1987 were 7,400 yen or about US $60 per month, and the basic monthly pension under this scheme—for which the age of eligibility is 65 years—was around 52,200 yen or US $420 for someone who had contributed to one of the two original schemes throughout his or her working life. Benefits will be adjusted according to the consumer price index in future years.

As of 1989, employees under age 65 do not pay directly into the NP scheme, but are required to pay into the new EPI, which in turn makes an appropriate contribution to NP to cover the employee's basic pension. The rest of the 12.4 percent (as of 1987) of male worker's regular monthly salary that is collected as a premium (half from the employee and half from the employer) goes into a fund that will be used to pay an earnings-related pension, in addition to the basic pension. The pensionable age is 60 for males, as it was under the old EPI, but the Ministry of Health and Welfare would like to raise the age to 65.[47] It is estimated that the replacement rate of the combined basic and earnings-related pension will be 69 percent, rather than as high as 83 percent without the reform.[48]

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Public pensions are an increasingly important source of income for retired Japanese elderly

Women under EPI are eligible for benefits at age 55, and their contribution rate was only 11.5 percent in 1987. But male and female contribution rates are to be equalized around 1993 and their ages of eligibility by 2000. There is also a complicated transition formula for benefits that will be used for the next 20 years, so that those between the ages of 40 and 60 in 1986 who expected pensions under the old system can be eased into the new system and adjust their financial planning. Persons who were 60 or over in 1986 will receive benefits calculated under the old system.

Either early or late receipt of pension benefits can be chosen with commensurate decreases or increases in average benefits. Under both the old and new systems, there are earnings tests that reduce earnings-related benefits substantially between the ages of 60 and 65, but the test is eased after 65. Some analysts expect that the pension reform will increase the supply of older workers, especially those wishing to work on a part-time basis, because there is some evidence that pension eligibility affects the labor force activity of older workers.[49]

Increased labor force participation of the elderly, or at least no further declines, would help hold down the ratio of beneficiaries to contributors and reduce the need for increased pension contribution rates. Based on the 1986 reform, the government projects that the premium rate under EPI will increase to 28.9 percent in 2025 from 12.4 percent in 1987. If the Ministry of Health and Welfare succeeds in raising the EPI pensionable age to 65, this ultimate rate will be reduced to 23.9 percent.[50] Of course, raising the age of eligibility may create greater challenges for the Ministry of Labor to encourage employers to provide more opportunities for older workers.

Health Care and Homes for the Aged

The law regarding health care for the elderly has also been revised in an effort to curb rising government medical care expenditures. In Japan, 99 percent of the population has health insurance, most of them, once again, under one of two major systems—one for employees and their dependents (Health Insurance for Employees (HIE), covering 52 percent of the insured population in 1986) and one for self-employed people, retirees, and their dependents (National Health Insurance (NHI), covering 38 percent).[51]

Under HIE, part of which is administered by the government and part by large individual firms or groups of firms, the employer and employee share the cost of premiums, which in recent years has been around 8 percent of the employee's earnings (in 1985, an average of US $1,830). The insured person then pays 10 percent of the cost of medical care received, while dependents pay 20 percent of in-patient costs and 30 percent of out-patient costs. (A Central Social Insurance Council determines standard medical care fees, although some firms may provide supplemental benefits, and supplemental private medical insurance is growing in popularity.) Should the amount paid by the insured as copayment exceed approximately $430 per month, the difference is reimbursed.

Under NHI, which is administered by the government, the average premium payment in 1985 was approximately $325. Individuals are responsible for a copayment of 30 percent of costs for all care for both the insured and dependents. However, as with HIE, monthly copayments over $430 per month are reimbursed.

Given the early retirement age limits in Japan, most of the elderly are insured under NHI, which until 1968 required a copayment of 50 percent for dependents; if the spouse of an elderly person needed expensive medical care, the copayment would mount up. In 1973, the insurance system was revised to limit monthly copayments and to provide free care for those ages 70 and over. Not surprisingly, the utilization of medical care by the elderly increased dramatically after 1973, as did national health care costs. The increases were so great and the burden of elderly care on the NHI program so disproportionate that the health insurance system was revised again in 1983 to require HIE to make contributions to NHI for the care of the elderly and to establish nominal fees to be paid by those ages 70 and over of about $6 per month for outpatient care and about $3 per day for hospitalization. The revision also consolidated and increased health screening programs for degenerative diseases for persons ages 40 and over to promote healthier aging.

Nevertheless, medical care costs (through the health insurance system,

excluding private costs) have continued to grow faster than national income. The proportion of the total costs accounted for by the 70-and-over population surpassed 30 percent in 1986, and the per capita medical costs for the elderly were over four times the average.[52] Of special concern are the relatively long hospital stays of the elderly, stemming in part from the propensity of many Japanese physicians to prolong life at any cost.

However, various analysts have also noted that in Japan, hospitals are to some extent used in lieu of homes for the aged.[53] The statistics on living arrangements of the elderly cited earlier confirm that a substantial proportion (2.6 percent of those 65 and over in the 1985 census) are in hospitals. This phenomenon, called "social hospitalization," avoids the stigma attached to institutionalization, which is often equated to the folkloric practice of *obasuteyama* or leaving grandmother on the mountain to die.

In the United States approximately 5 percent of the elderly live in homes for the aged, in comparison to only 1.6 percent of Japanese ages 65 and over. In Japan, three basic types of nonprofit homes for the aged are subsidized by the government. In 1986 these included: 942 homes accepting elderly who can more or less take care of themselves (containing 32 percent of all beds in homes); 1,731

Box 5. Innovative Programs for the Elderly

National programs for the elderly are administered by local governments with subsidies from the national government, but local governments have also been developing their own programs. Taito, a ward of Tokyo, has established an innovative system in which volunteers who help the elderly in their homes earn coupons that can be redeemed for similar aid in the future for themselves or for their relatives.[1] The Tokyo Metropolitan Government is developing a radio transmitter system for the elderly to use in case of emergency, but so far only 710 out of 138,000 elderly who live alone in Tokyo are included in the system.[2] Perhaps most famous is the program of Musashino City, a suburb of Tokyo, which provides care until death for the elderly who use their property as collateral for service costs.[3] Upon their deaths, an appropriate share of the proceeds from the sale of their property goes to the program.

One very controversial proposal has come from the national Ministry of International Trade and Industry—exporting the elderly. Known as the "Silver Columbia Plan," the idea was initially proposed in 1986 by a government official who had just returned from a posting in Spain, where he noted Japanese retirees' yen would buy a lot of services. Under the plan, the overseas silver towns were to be constructed by private companies and were to be ready for occupancy by elderly Japanese in 1992, the 500th anniversary of Columbus' landing in America. Besides Spain, various Asian countries and Australia were mentioned as possible destinations, but there was considerable public outcry in some of these countries against the idea of enclave settlements and potential colonization by the Japanese. The ministry has now withdrawn the proposal, but is considering a new plan to ask foreign countries to give extended tourist visas to Japanese and to encourage Japanese companies to build leisure facilities abroad.[4]

References

1. Burgess, John, "Japan Faces 'Graying' of Population: Many of Elderly Alone, Destitute," *Washington Post* (October 12, 1986) p. A21.
2. Barney, Lee, "Emergency System for Seniors Gets Direct Touch," *Japan Times* (August 27, 1988) p. 3.
3. Hirayama, Hisashi, "Public Policies and Services for the Aged in Japan," *Journal of Gerontological Social Work*, Vol. 9, No. 4 (Summer 1986) pp. 39-52.
4. "Japanese Elderly Put on Export List," *Hongkong Standard* (August 8, 1986); Hamish McDonald, "Letter from Silver Columbia," *Far Eastern Economic Review* (February 19, 1987) p. 122; "Japan Drafts Plan to Promote Overseas Travel for Elderly," *Honolulu Star-Bulletin* (May 11, 1988) p. A17.

homes for the bedridden (with 60 percent of beds), and 286 homes with moderate fees for those with limited income (8 percent of all beds).[54] The total number of homes increased by almost 50 percent between 1980 and 1986. Nevertheless, there is still an excess demand for placement in homes, especially in urban areas. Also, it is not clear whether or not hospitalization would decrease if more space were available in homes for the aged.

The 1983 health insurance reform did attempt to promote more care for the elderly outside hospitals through programs of health advice upon discharge from the hospital, home visits by nurses, physical therapy, and day care for the mentally impaired, but shortages of trained personnel have seriously limited the actual provision of these public services. Private health services to the elderly in their homes have also been slow to expand, in part because of the resistance of some physicians, who have a vested interest in hospital-based services.[55]

As was noted in the discussion of senility in Box 2, page 12, the stresses on caretakers of the elderly at home can be considerable. In 1986, in recognition of these problems, the government announced the goal of increasing the number of day care centers for the elderly from 500 to 3,000 in the near future and to 10,000 in the long run. There has already been some progress in the provision of home helper services in Japan. Between 1970 and 1987, the ratio of the number of home helpers to persons 65 and over improved, from 1 per 1,210 to 1 per 530. Furthermore, both local and national governmental agencies are trying to develop new ways of caring for the elderly (see Box 5).

Nevertheless, the various levels of government will need to move quickly to cope with the rapid growth of the elderly population in need of health care or assistance in their daily lives. Naohiro Ogawa, an expert on the economics of aging and health care in Japan, has projected that the share of the 65 and over population in total medical expenditures under the two major systems will increase from 35 percent in 1986 to 43 percent in 2000 and to 55 percent in 2025.[56]

Using a complex economic-demographic model that allows for changes in the labor force participation of females, who are the usual caretakers of the frail elderly, Ogawa projects that the ratio of the number of elderly who are bedridden or who suffer from senile dementia to the number of women ages 45-54 who are not working will increase from 0.4 in 1985 to 0.6 in 2000 and to 1.2 in 2025.

Economic Implications of Aging

The implications of aging for economic growth can be understood by considering the influence of aging on the two basic inputs to economic output: labor and capital.

Labor

Without a doubt, the Japanese working-age population will be older in the future, and if labor force participation rates at each age remain constant, then the labor force will age. But rates are likely to change, especially for the elderly and for women. Rates for the elderly will be influenced by health, pension availability, employment policy and opportunities, and preferences for leisure. If Japan follows the path of other developed countries, however, the labor force participation of the elderly will continue to decline. On the other hand, it is widely expected that female labor force participation will continue to rise in Japan. Thus, the declining labor force activity of older Japanese and increasing activity of women should help to offset the aging of the working-age population.

Little is known about future labor force participation rates, but even less is known about the implications of aging for the quality of the labor force. As a result

of increasing educational attainment, each new cohort of workers enters the job market with more training than the previous one. Because of the aging process, the proportion of younger and presumably better-trained workers in the total labor force will decline in the future. Nevertheless, each new cohort of older workers will be better educated than the last, and the aggregate quality of the labor force should continue to improve over time. Also, given the importance of on-the-job training in the lifetime employment system, the older workers within that system embody significant amounts of company-specific human capital.

Although older workers everywhere are thought to have a slower reaction than younger workers, they may compensate for that weakness with better judgment. One 1978 study of 600 firms in the machine industry in Japan found that workers ages 60 and over generally could perform all of their duties satisfactorily, and supported the view that differences *within* age groups in capacity may be greater than differences *between* age groups.[57] Moreover, the older worker of today is considerably stronger and healthier than the older worker of the past. The challenge for employers is to tailor jobs and promotion hierarchies in such a way as to take advantage of the older worker's strengths while at the same time allowing advancement opportunities for younger workers.

Japan could also attempt to meet future labor force needs through increasing either the birth rate or the immigration rate. As discussed in the section on fertility, however, higher birth rates seem unlikely. Ten years ago, increases in immigration seemed equally unlikely, given the homogeneous and somewhat xenophobic nature of Japanese society.

Nevertheless, the number of foreign workers in Japan is increasing. The number of legal foreign workers was 54,736 in 1986, up from 42,806 in 1984, but over 82 percent of them were entertainers and athletes. Only 12 percent were employed in trade, business, or investment in 1986, down from 16 percent in 1984.[58]

Surveys indicate a growing acceptance of skilled foreign workers, but they remain occupationally segregated. Japanese are generally quite reluctant to allow unskilled workers into the country without strict limits on their stay and activities.

In 1987, 11,000 illegal workers were apprehended—the typical apprehended illegal alien was a Filipino woman working as a so-called entertainer. However, estimates of the total illegal work force ranged as high as 60,000.[59] As a result, efforts are being made to tighten visa requirements and inspection by airlines and immigration authorities.

A more likely source of labor will be through the increased use of robots. Although Japan still lags behind Sweden in the ratio of robots to industrial workers—10.7 versus 17.0 per 10,000—it is ahead of the rest of the world, including the United States, where the ratio was 2.3 robots per 10,000 workers in 1985.[60]

Savings and Investment

Although economists may debate the best way to measure savings and whether or not Japanese statistics are comparable to those of other countries, by any measure, the Japanese savings rate is higher than those of most other developed countries, though it has been declining steadily since the early- to mid-1970s. The explanations suggested for Japan's relatively high rate include limited public pensions, the high costs of education and housing, the biannual bonuses, tax incentives, rapid economic growth, and culture, but no consensus has emerged.

Given the lack of consensus about why Japan has such a high savings rate, it is even more difficult to predict how population aging will affect it, although the 1985 Economic White Paper forecast that the savings rate will be cut in half in the next

century. According to life-cycle saving theory, workers save while they are young, but then in retirement they dissave, i.e., they live off their savings or draw them down. Studies of the elderly in Japan, however, reveal that they do not necessarily follow this pattern.[61] Analysis of their economic behavior is once again complicated by the fact that they frequently live with the younger generation. But even controlling for coresidence of parents and children, there is some indication that the elderly continue to save in retirement. One possibility is that they want to make bequests to their children, but another is that they are uneasy about the future: how long and under what conditions they will survive.

However, if retirement life is shortened by increased labor force participation of older Japanese, then the savings rate may decline. Increased taxes and contributions to the public pension system may also reduce savings among Japanese of all ages through decreasing disposable income or through lessening the motivation to save for retirement.

There is also debate about the implications of aging for Japan's balance of payments, particularly through overseas investment. The 1985 Economic White Paper argued that Japan's capital exports will fall as a result of the decline in savings. But no matter what happens to overall savings, many economists expect that an increasing proportion of capital accumulated will be sent abroad. The relative returns to capital invested in Japan will decline, as the capital-labor ratio increases in response to the effects of aging on the supply of labor, so investments in countries with cheaper, more plentiful labor will be attractive.

Of course, overseas production is already important to Japan. Part of its current direct foreign investment is in response to the need for cheaper labor, but it is also an attempt to circumvent trade barriers and to locate production closer to markets. Japanese investment in the United States takes both forms. With the strength of the yen, even American wages look relatively low. The result is that exports are reduced, assuming that not too many component parts and not too much production equipment are shipped overseas from Japan for fabrication, and imports are increased to the extent that some of the finished products made overseas are imported to Japan. Thus, the trade surplus is reduced, and capital outflows further reduce the overall balance of payments.

Increased production overseas has its own implications for labor in Japan—less is needed. Although at the macro level this result helps alleviate labor shortages that might be a consequence of population aging in the long run, in the short run jobs are lost, economic restructuring must take place, and unemployment may increase. The Ministry of International Trade and Industry has predicted a loss of 800,000 employment opportunities between 1986 and 2000, assuming that direct foreign investment grows 14 percent per year, a modest assumption in view of recent history.[62] Employment adjustment measures, primarily restrictions of overtime work and increased transfers, thus far have been greatest in the manufacturing sector, especially in machinery-related firms and less so in consumer goods-related firms.

Economic-demographic models that account for many of the above factors generally support one basic conclusion: With slower growth of the labor force and capital accumulation and a restructuring of the economy towards the less productive service sector, the growth rate of the economy will slow, but by how much depends on a variety of assumptions.[63] Nevertheless, one should never underestimate the strength and flexibility of the Japanese economy, as exemplified by its remarkable response to the high value of the yen and pressures to reduce exports in the late-1980s.

Since mid-1987 Japan's economic growth has been more and more based on increased domestic demand for high value-added products. Who knows what

the advent of increased leisure and richer elderly will mean for the development of a "silver" market? If Japan continues to succeed in restructuring its economy, then its economic growth may stimulate continued capital accumulation and provide greater resources to help pay the costs of its aging population. A growing economy can cure a variety of ills.

The Elderly and Japan's Future

Evaluating the Present

The situation of the elderly in Japan was compared to the glass of water that is either half full or half empty. For the Western elderly looking at the Japanese situation, the glass may look half full, given the longer life expectancy, the higher incidence of living with children, and, at least for Americans, the more generous medical insurance program for Japanese elderly. Although opinion surveys indicate that most Western elderly prefer intimacy at a distance, one never knows for sure whether or not such responses are simply rationalizations after the fact. Westerners, however, may be surprised to learn that many Japanese workers are forced to retire at a relatively young age, some experience lengthy periods of unemployment, and even though a smaller proportion live in nursing homes, an extended stay in the hospital may be the alternative.

Individual elderly Japanese, however, may not care very much about international comparisons. They may be more concerned about how the lives of the elderly have changed over time in Japan, and how their current situation compares to their expectations of old age. On the minus side, fewer Japanese, who do indeed prefer living with their adult offspring, do so than in the past. Moreover, in a modernized, industrial society, it is difficult for the elderly to continue working, given institutional constraints. On the plus side, however, is a longer life and much improved pension and medical insurance schemes (although elderly 20 years from now will have lower pension benefits as a result of the 1986 reform). Also today's elderly are better educated and richer than yesterday's, improvements that should continue well into the future.

Diane Gruenstein

For better or worse, the lives of Japanese elderly will continue to change.

Social scientists may argue about whether the elderly have lost status or respect or whether they are less integrated into society than in the past. These debates are hard to settle. Let it simply be said that things have changed—for better or worse—and that they are likely to continue to change. Adaptation may be particularly difficult for the current generation of elderly, a transitional cohort that has witnessed tremendous demographic, social, and economic change in their lifetimes, and accordingly, may feel greater uncertainty. Perhaps the next cohort will be better prepared for the realities of old age.

Future Effects of Aging

The particularly rapid pace of aging in Japan and the associated potential difficulties have captured the attention of policymakers and officials to an extent

unequaled in the United States. A noted government report, *Japan in the Year 2000*, highlighted population aging along with internationalization and the maturation of the economy as the three greatest challenges facing Japan in the 21st century. The prime ministers of Japan have regularly referred to aging as they have set the policy agenda. Former Prime Minister Noboru Takeshita particularly noted the need for further review of the national health insurance system and pension schemes and for improved nursing homes for the aged, given population aging. He also used aging as a rationale for his party's recently enacted tax reform, which lowered income taxes, but instituted a consumption tax, thus shifting more of the costs of government programs to the elderly.

Of particular concern to policymakers is the perception that the government increasingly is being expected to play a larger role in the care of the elderly, while the individual elderly person and families play smaller roles. The pension, medical insurance, and tax reforms have all been designed to shift the balance somewhat away from the government. Furthermore, the 1987 White Paper on Health and Welfare emphasized the importance of home care of the elderly and stressed the importance of family members as caregivers.

Increasing the role of the family in Japan, however, generally means increasing the burden on middle-aged women. At the same time that the government would like them to take greater care of the elderly, women are being relied on increasingly in the labor force, especially as part-time workers. In the simplest terms, the choice would seem to be that either they can stay home, reduce the need for public services, and let the economy grow more slowly, or they can go to work and increase the need for services, but boost the economic growth rate and pay a greater share of taxes and public pension premiums. Which would be more fulfilling to the individual woman is open to debate.

In any case, many of the best analysts are pessimistic about to what extent responsibility can be shifted from the government to families. Besides increased female labor force participation, there is less co-residence of elderly and adult children, and the stresses on family care can be great. As Daisaku Maeda states, "The term 'family care' has a beautiful and noble connotation, but, in many cases, it is accompanied by the painful sacrifice of the caretakers, and the quality of care is frequently poor."[64] Japan, given population aging, may find it necessary to develop programs to aid its citizens on the basis of need, as may the United States, rather than defining eligibility solely on the basis of age.[65] Age-based programs may not be financially sustainable in the long run, yet the needs of the elderly and their families for assistance should be recognized.

Lessons for Other Countries

What can be learned by other countries from Japan's experience with aging? Asian countries are particularly eager to see if there is a model for aging that differs from that of the West, which is perceived to have abandoned its elderly.[66] Are the adoption of Western values of individualism and materialism and the loss of familism concomitant with economic development and the completion of the demographic transition? The answer for Japan, as discussed above, would appear to be mixed. Things have changed, but the Japanese case is still significantly different from that of other developed countries.

Developed countries share many of Japan's concerns, most obviously those about the increasing costs of public pensions and health care. However, the importance of synchronizing retirement ages and ages of eligibility for pensions and understanding the implications of differences in them as incentives to work or not work is also universal. The trend toward earlier retirement is being wel-

comed in some European countries as a means of alleviating unemployment problems, but such changes may be counterproductive in the long run, once economies are restructured.

Although Japan, with its low retirement age limits and high unemployment of older workers, cannot be viewed as a model, at least it is making progress in raising retirement and eligibility ages and at the same time providing incentives to employers to hire older workers. Elderly Japanese with their apparently strong work ethic have been willing to make sacrifices to continue working. It is not clear with the greater love of leisure in the West, whether or not older workers would be willing to do the same, but incentives could be provided.

Given the inexorable progress of population aging, it would seem that revisions of definitions, attitudes, and expectations with regard to old age are necessary not only in Japan, but everywhere, among people of all ages. We are all facing a new era in human history that represents the success of efforts to allow people to control their fertility and to live longer. Japan, as a result of its rapid demographic transition, is facing the challenge of accommodating this new demographic reality earlier and with greater urgency. Nevertheless, given its resiliency and ability to adapt, the graying of its population need not spell decline. □

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References

1. Japan Ministry of Health and Welfare, *Vital Statistics 1986*, Vol. 1 (Tokyo, 1987) pp. 166-167.
2. Japan Economic Planning Agency, *Ni-sen no Nihon* (Tokyo, 1982, English version, *Japan in the Year 2000*, published by the *Japan Times* in 1983).
3. Noguchi, Yukio, "Population Aging, Social Security, and Capital Accumulation: An Analysis Through a Behavioral Simulation Model," paper presented at the Conference on National and International Implications of Population Aging, Oiso, Japan, February 13-15, 1986, sponsored by the Carnegie Corporation of New York.
4. Ogawa, Naohiro and Robert W. Hodge, "Old-Age Security for Parents and Expectations from Children: Attitudes and Perceptions of Married Japanese Women of Childbearing Age," in *Mainichi Newspapers, Summary of Nineteenth National Survey on Family Planning* (Tokyo, 1988) p. 105.
5. Maeda, Daisaku, "The Role of Families in the Care of the Elderly," paper presented at the United Nations International Conference on Aging Populations in the Context of Urbanization, Sendai, Japan, September 12-16, 1988.
6. Japan Institute of Population Problems, *Latest Demographic Statistics 1987* (Tokyo: Ministry of Health and Welfare, 1988) pp. 48-49.
7. Kuroda, Toshio, "Overview—Persistent Decline in Japanese Fertility," in *Mainichi Newspapers, Summary of Nineteenth National Survey on Family Planning* (Tokyo, 1988) pp. 11-27.
8. Coleman, Samuel, *Family Planning in Japanese Society: Traditional Birth Control in a Modern Urban Culture* (Princeton, NJ: Princeton University Press, 1983).
9. Olshansky, S. Jay and A. Brian Ault, "The Fourth Stage of the Epidemiologic Transition: The Age of Delayed Degenerative Diseases," *Milbank Quarterly*, Vol. 64, No. 3 (1986) pp. 355-391.
10. Maeda, Daisaku, R. Teshima, H. Sugisawa, and Y.S. Asakura, "Aging and Health in Japan," *Journal of Cross-Cultural Gerontology*, Vol. 4, No. 2 (in press).
11. "Health Minister Urges More Anti-Smoking Measures," *Japan Times* (April 7, 1988) p. 3.
12. Fujimoto, K., "U.S. Tobacco Firms Eye Japan Mart," *Japan Times* (August 21, 1988) p. 10.
13. Japan Policy Office for the Aged, *Aging in Japan* (Tokyo: Prime Minister's Secretariat, 1983) p. 10.
14. Iwao, Sumiko, "Changing Roles of Women and Family in an Aging Japanese Society," paper presented at the Conference on National and International Implications on Population Aging, Oiso, Japan, February 13-15, 1986, sponsored by the Carnegie Corporation of New York.
15. Lebra, Takie S., *Japanese Women: Constraint and Fulfillment* (Honolulu: University of Hawaii Press, 1984) p. 257.
16. Japan Ministry of Health and Welfare, *Vital Statistics 1986*, Vol. 1, p. 375; Japan Statistics Bureau, *Population Census of Japan, 1985*.
17. Atoh, Makoto, "Changes in Family Patterns in Japan," paper presented at the IUSSP Seminar on Theories of Family Change, Tokyo, Japan, November 29-December 2, 1988, Table 7, p. 35.
18. Hirosima, Kiyosi, "Recent Change in Prevalence of Parent-Child Co-Residence in Japan," *Journal of Population Research* (Japan), Vol. 10 (May 1987) pp. 33-40.
19. Martin, Linda G., "Living Arrangements of the Elderly in Fiji, Korea, Malaysia, and the Philippines," *Demography*, Vol. 26, No. 4 (in press).
20. Soldo, Beth J. and Emily M. Agree, "America's Elderly," *Population Bulletin*, Vol. 43, No. 3 (Washington, DC: Population Reference Bureau, 1988) p. 30.
21. *Mainichi Newspapers, Summary of Nineteenth National Survey on Family Planning*, pp. 197-198; Kazumasa Kobayashi, "Attitudes Toward Children and Parents," in *Mainichi Newspapers, Summary of Fourteenth National Survey on Family Planning* (Tokyo, 1978) pp. 101-122.
22. *Mainichi Newspapers* and Nihon University, "1988 National Survey on the Family," unpublished data.
23. Sussman, Marvin B. and James C. Romeis, "Family Supports for the Aged: A Comparison of U.S. and Japan Responses," *Journal of Comparative Family Studies*, Vol. 12 (1981) pp. 475-492.
24. Smith, Robert J., "Gender Inequality in Contemporary Japan," *Journal of Japanese Studies*, Vol. 13, No. 1 (1987) p. 13.
25. Long, Susan O., *Family Change and the Life Course in Japan* (Ithaca, NY: China-Japan Program, Cornell University, 1987) pp. 60-61; Daisaku Maeda, "The Role of Families in the Care of the Elderly," pp. 20-21.

26. Torrey, Barbara B., Kevin Kinsella, and Cynthia M. Taeuber, *An Aging World* (Washington, DC: U.S. Bureau of the Census, 1987).
27. Japan Statistics Bureau, *Annual Report on the Labour Force Survey 1987* (Tokyo, 1988) p. 23 and p. 27; U.S. Bureau of Labor Statistics, *Employment and Earnings*, Vol. 35, No. 1 (January 1988) p. 160.
28. Japan Statistics Bureau, *Japan Statistical Yearbook 1987*, p. 664.
29. Japan Institute of Labour, *1988 Japanese Working Life Profile: Statistical Aspects* (Tokyo, 1988) p. 76.
30. Seike, Atsushi, "The Effect of Employees Pension on the Labor Supply of the Japanese Elderly," manuscript, Keio University, 1988; John McCallum, "Japanese *Teinen Taishoku*: How Cultural Values Affect Retirement," *Ageing and Society*, Vol. 8 (1988) pp. 23-41.
31. Japan Statistics Bureau, *Annual Report on the Labour Force Survey 1987*, pp. 100-105.
32. Japan Ministry of Labour, *Yearbook of Labour Statistics 1986* (Tokyo, 1987) p. 102.
33. Japan Institute of Labour, *1988 Japanese Working Life Profile: Statistical Aspects*, p. 80; Kenichi Furuya and Linda G. Martin, "Employment and Retirement of Older Workers in Japan," *Nihon University Population Research Institute Research Paper Series*, No. 8 (December 1981) p. 12.
34. Japan Institute of Labour, *Wages and Hours of Work*, Japanese Industrial Relations Series, No. 3 (Tokyo, 1984) p. 17.
35. Martin, Linda G., "Japanese Response to an Aging Labor Force," *Population Research and Policy Review*, Vol. 1, No. 1 (January 1982) pp. 19-41; Carl Mosk and Yoshi-Fumi Nakata, "The Age-Wage Profile and Structural Change in the Japanese Labor Market for Males, 1964-1982," *Journal of Human Resources*, Vol. 20, No. 1 (1985) pp. 100-116; Linda G. Martin and Naohiro Ogawa, "The Effect of Cohort Size on Relative Wages in Japan," in Ronald D. Lee, W. Brian Arthur, and Gerry Rodgers, eds., *Economics of Changing Age Distributions in Developed Countries* (New York: Oxford University Press, 1988) pp. 59-75.
36. Japan Ministry of Labour, *Yearbook of Labour Statistics 1986*, p. 50.
37. Japan Institute of Labour, *Employment and Employment Policy*, Japanese Industrial Relations Series, No. 1 (Tokyo, 1988) p. 14.
38. Japan Ministry of Labour, *Yearbook of Labour Statistics 1986*, p. 49.
39. Japan Institute of Labour, *Employment and Employment Policy*, p. 18.
40. Sorrentino, Constance, "Japanese Unemployment: BLS Updates Its Analysis," *Monthly Labor Review*, June 1987, pp. 47-53.
41. Smith, Charles, "Get'em Young, Boss! Japanese Companies Use Heavy-Hand Tactics to Recruit Graduates," *Far Eastern Economic Review* (September 22, 1988) p. 74.
42. Japan Statistics Bureau, *Japan Statistical Yearbook 1987*, pp. 542-543.
43. Japan Management Coordination Agency, *Report on the International Comparative Survey on the Lives and Perceptions of the Elderly* (Tokyo, 1987; in Japanese) pp. 300-301.
44. Japan Ministry of Health and Welfare, *1988 Health and Welfare Statistics in Japan* (Tokyo: Health and Welfare Statistics Association, 1988) p. 165; "Social Security Payments Up 8.3 Percent in FY '86," *Asahi Evening News* (September 26, 1988) p. 3.
45. Japan Institute of Labour, "Social Security Burden in the Aging Society," *Japan Labor Bulletin*, Vol. 27, No. 5 (May 1988) p. 1; "Aging Society Likely to Cause Greater Social Security Burden in 20 Years," *Japan Times* (March 12, 1988) p. 9.
46. Japan Social Insurance Agency, *Outline of Social Insurance in Japan 1986* (Japan International Social Security Association, 1987); Nagahisa Hiraishi, *Social Security*, Japanese Industrial Relations Series, No. 5 (Japan Institute of Labour, 1987).
47. "Welfare Plan Would Raise Lowest Pension Age to 65," *Japan Times* (October 26, 1988) p. 1.
48. Japan Foundation for Research and Development of Pension Schemes, *National System of Old-Age, Disability and Survivors' Benefits in Japan* (Tokyo, 1985) p. 36; Randall S. Jones, "The Economic Implications of Japan's Aging Population," in Japan Economic Institute, *Japan: Exploring New Paths* (Washington, DC, 1988) p. 80.
49. Seike, Atsushi, "The Effect of Employees Pension on the Labor Supply of the Japanese Elderly," p. v.
50. Hiraishi, Nagahisa, *Social Security*, p. 34.
51. Ibid.; Japan Social Insurance Agency, *Outline of Social Insurance in Japan*.
52. "Health Care for Elderly Pushes Medical Costs to Record High," *Japan Times* (June 12, 1988) p. 2.

53. Lawrence, Timothy L., "Health Care Facilities for the Elderly in Japan," *International Journal of Health Services*, Vol. 15, No. 4 (1985) pp. 677-697; Daisaku Maeda et al., "Aging and Health in Japan"; Nobuo Maeda, "Health and Welfare Policy for the Elderly in Japan," paper presented at the 1983 U.S.-Japan Conference on Aging, East-West Population Institute, Honolulu, p. 7.
54. Japan Ministry of Health and Welfare, *1988 Health and Welfare Statistics in Japan*, p. 120.
55. Lawrence, Timothy L., "Health Care Facilities for the Elderly in Japan," p. 695; H. Kimura, "Home Health Care Industry Prepares for Problems Caused by Aging of Society," *Japan Times* (February 27, 1988) p. 3.
56. Ogawa, Naohiro, "Population Aging and Medical Demand: The Case of Japan," in United Nations, *Economic and Social Implications of Population Aging* (New York, 1988) pp. 254-275.
57. Ogawa, Naohiro, "Implications of the Aging of Population for Socio-Economic Development and National Plans and Policies—Lessons from the Japanese Experience," *Asian Population Studies Series* No. 80 (Bangkok: UNESCAP, 1987) p. 66.
58. "New Job Opportunities in Japan," *Japan Economic Survey*, Vol. 12, No. 10 (October 1988) p. 12.
59. "Illegal Entry by Foreign Nationals Up Sharply," *Japan Labor Bulletin*, Vol. 27, No. 1 (January 1988) p. 3; "Response to Foreign Workers," *Japan Labor Bulletin*, Vol. 27, No. 5 (May 1988) p. 4; "Japanese Business Strives for a Consensus on Foreign Workers," *Japan Times* (August 10, 1988) p. 3.
60. Smith, Charles, "Mechanical Men Steal a March on the West," *Far Eastern Economic Review* (December 19, 1985) p. 51.
61. Ando, Albert, "The Savings of Japanese Households: A Micro Study Based on Data from the National Survey of Family Income and Expenditure," manuscript, University of Pennsylvania, 1985; Robert Dekle, "Do the Japanese Elderly Reduce Their Total Wealth?," manuscript, Reischauer Institute of Japanese Studies, Harvard University, 1987.
62. Inagami, T., "The Rapid Rise in the Value of the Yen, Deindustrialization and Employment Adjustment," *Japan Labor Bulletin*, Vol. 26, No. 7 (July 1987) p. 6.
63. Ogawa, Naohiro, "Economic Implications of Japan's Ageing Population: A Macro-Economic Demographic Modelling Approach," *International Labour Review*, Vol. 121, No. 1 (January-February 1982) pp. 17-33; Naohiro Ogawa, "Ageing of the Population," in UNESCAP, *Population of Japan*, Country Monograph Series No. 11 (Bangkok, 1984) pp. 249-268.
64. Maeda, Daisaku, "The Role of Families in the Care of the Elderly," p. 17.
65. Neugarten, Bernice L., ed., *Age or Need? Public Policies for Older People* (Beverly Hills, CA: Sage, 1982).
66. Martin, Linda G., "The Aging of Asia," *Journal of Gerontology: Social Sciences*, Vol. 43, No. 4 (1988) pp. S99-S113.

Suggested Readings

Ariyoshi, Sawako, *The Twilight Years* (translated by M. Tahara. Tokyo and New York: Kodansha International, 1984).

Campbell, Ruth and Elaine M. Brody, "Women's Changing Roles and Help to the Elderly: Attitudes of Women in the United States and Japan," *The Gerontologist*, Vol. 25, No. 6 (December 1985) pp. 584-592.

Furuya, Kenichi and Linda G. Martin, "Employment and Retirement of Older Workers in Japan," *Nihon University Population Research Institute Research Paper Series*, No. 8 (December 1981).

Hiraishi, Nagahisa, *Social Security*, Japanese Industrial Relations Series, No. 5 (Japan Institute of Labour, 1987).

Hirosima, Kiyosi, "Recent Change in Prevalence of Parent-Child Co-Residence in Japan," *Journal of Population Research* (Japan), Vol. 10 (May 1987).

Iwao, Sumiko, "Changing Roles of Women and Family in an Aging Japanese Society," paper presented at the Conference on National and International Implications on Population Aging, Oiso, Japan, February 13-15, 1986, sponsored by the Carnegie Corporation of New York.

Japan Policy Office for the Aged, *Aging in Japan* (Tokyo: Prime Minister's Secretariat, 1983).

Lawrence, Timothy L., "Health Care Facilities for the Elderly in Japan," *International Journal of Health Services*, Vol. 15, No. 4 (1985) pp. 677-697.

Lebra, Takie S., *Japanese Women: Constraint and Fulfillment* (Honolulu: University of Hawaii Press, 1984).

Long, Susan O., *Family Change and the Life Course in Japan* (Ithaca: China-Japan Program, Cornell University, 1987).

Maeda, Daisaku, R. Teshima, H. Sugisawa, and Y.S. Asakura, "Aging and Health in Japan," *Journal of Cross-Cultural Gerontology*, Vol. 4, No. 2 (in press).

Maeda, Daisaku, "The Role of Families in the Care of the Elderly," paper presented at the United Nations International Conference on Aging Populations in the Context of Urbanization, Sendai, Japan, September 12-16, 1988.

Martin, Linda G., "The Aging of Asia," *Journal of Gerontology: Social Sciences*, Vol. 43, No. 4 (1988) pp. S99-S113.

Martin, Linda G. and Suzanne Culter, "Mortality Decline and Japanese Family Structure," *Population and Development Review*, Vol. 9, No. 4 (December 1983) pp. 633-649.

Martin, Linda G. and Naohiro Ogawa, "The Effect of Cohort Size on Relative Wages in Japan," in R.D. Lee, W.B. Arthur, and G. Rodgers, eds., *Economics of Changing Age Distributions in Developed Countries* (New York: Oxford University Press, 1988) pp. 59-75.

Ogawa, Naohiro, "Implications of the Aging of Population for Socio-Economic Development and National Plans and Policies—Lessons from the Japanese Experience," *Asian Population Studies Series* No. 80 (Bangkok: UNESCAP, 1987).

Ogawa, Naohiro, "Population Aging and Medical Demand: The Case of Japan," in United Nations, *Economic and Social Implications of Population Aging* (New York, 1988) pp. 254-275.

Palmore, Erdman B. and Daisaku Maeda, *The Honorable Elders Revisited* (Durham, NC: Duke University Press, 1985).

Plath, David, "'Ecstasy Years'—Old Age in Japan," *Pacific Affairs*, Vol. 46, No. 3 (1973) pp. 421-429.

Plath, David W., *Long Engagements: Maturity in Modern Japan* (Stanford, CA: Stanford University Press, 1980).

Taeuber, Irene B., *The Population of Japan* (Princeton, NJ: Princeton University Press, 1958).

Vogel, Suzanne, "The Professional Housewife: The Career of Urban Middle Class Japanese Women," *Japan Interpreter*, Vol. 12, No. 1 (Winter 1978) pp. 16-43.

Discussion Points

1. Outline Japan's demographic experience in the 20th century. Compare it to the demographic experiences of other developed countries.

2. Compare Japan's current and projected population age and sex structure to those of other developed countries. How will they change between now and 2025? How does the make-up of the elderly population affect public policy?

3. How have changes in mortality patterns in Japan affected the demand for health services?

4. How have the interaction of Japan's fertility and mortality resulted in the current population structure? What are the prospects for the future?

5. Compare and contrast the lives of Japanese and American elderly in terms of residence, labor force participation, health, economic well-being, and leisure time.

6. There is a growing concern about care for the elderly in Japan. Debate the benefits and drawbacks of increased government care versus continued family support from both the government and individual viewpoints.

7. Describe the measures being taken by the government to ensure an adequate labor supply. Evaluate their progress.

8. Describe the elderly's income sources (e.g. pension, wages, etc.) Compare these to income sources of America's elderly.

9. There have been questions raised concerning the U.S. Social Security System's ability to support the elderly in the 21st century. What is the outlook for Japan's public pension and medical care systems? How will these changes affect the working-age population?

10. What are the benefits and drawbacks to using Japan as a model for aging in other developed and developing countries?

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